UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MAR 1 2012

Mr. Trip Oliver
Manager, Policy, Government and Public Affairs
Chevron North America
1550 Coraopolis Heights Road
Moon Township, Pennsylvania 15108

Discovery Date of Incident(s): December, 2011 and February 16, 2012
Location of Incident(s): Chevron gas well site, 8400 Noblestown Rd., McDonald, Robinson Township, Washington County, PA

Dear Mr. Oliver:

This office has received notification that you[1] discharged oil and/or hazardous substances in quantities that may be harmful in violation of Section 311(b)(3) of the Federal Water Pollution Control Act, 33 U.S.C. § 1321(b)(3) ("the Act") from a facility located at or near 8400 Noblestown Rd., McDonald, Pa. ("Facility," as further defined in *Enclosure 1*). Accordingly, the U.S. Environmental Protection Agency (EPA) would like to obtain additional information regarding the alleged incident or incidents and about efforts you have undertaken at the Facility to inhibit spills of oil and/or hazardous substances including whether you/your facility is in compliance with the Spill Prevention, Control and Countermeasures (SPCC) Regulations found at Title 40 C.F.R. Part 112.

Pursuant to Section 308(a) of the Act, 33 U.S.C. § 1318(a), you are hereby required to submit to EPA the information requested in this letter. If you fail to properly respond to this request, you may be subject to penalties. Pursuant to Section 309(g) of the Act, 33 U.S.C. § 1319(g), any person who violates Section 308 of the Act is subject to administrative penalties. Pursuant to Section 309(d) of the Act, 33 U.S.C. § 1319(d), any person who violates Section 308 of the Act is subject to a civil penalty of up to $32,500 per day of violation. You also may be subject to criminal penalties pursuant to Section 309(c) of the Act, 33 U.S.C. § 1319(c), for negligently or knowingly providing false information in response to this request. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001. The information you provide may be used by EPA in administrative, civil or criminal proceedings.

[1]For purposes of this letter, the term "you" shall refer to an individual, a company, a partnership, a sole proprietorship, or a corporation, whichever is applicable.

You are entitled to assert a claim of business confidentiality covering any part or all of the information, in a manner described in 40 C.F.R. § 2.203(b). Information subject to a claim of business confidentiality will be made available to the public only in accordance with 40 C.F.R. Part 2, Subpart B. Unless a claim of business confidentiality is asserted at the time the requested information is submitted, EPA may make this information available to the public without further notice to you.

INFORMATION REQUIRED

1. Identify all substances released from the Facility in connection with the above referenced Regional Response Center Spill Number or Numbers. Specifically, identify:
    a. The name and Chemical Abstract Services ("CAS") Number for each substance discharged;
    b. For oils, identify the type and grade;
    c. Provide the quantity, concentration of each substance discharged and the method by which the concentration was measured or estimated. For mixtures, provide the name, quantity, and concentration of each constituent of that mixture;
    d. Provide the solubility and specific gravity of each substance discharged.

2. Describe the physical source (including, but not limited to vehicle, outfall, tank, container, pipe, ditch, conduit, or equipment) at the Facility from which the oil and/or hazardous substance or substances (the term "substance" as used here includes both oils and hazardous substances) initially was discharged on or around December, 2011 and February 16, 2012. If the substance was discharged from more than one source, please identify each specific source.

3. Provide the total quantity of undiluted substance(s) released from the Facility in gallons for oils and in pounds for hazardous substances.

4. List the location of the discharge, including the closest street address, the city, county, state, zip code, and provide the Global Positioning System ("GPS") coordinates.

5. List the starting time, date, and duration of the discharge and the time and date when the discharge entered a waterway.

6. List the time and date of the discovery of the discharge and the person(s) who made the discovery.

7. List the federal and state agencies, if any, to which the owner and/or operator reported the discharge(s), the dates and times on which the reports were made, and the name(s) and title(s) of the person(s) who made the reports.

8. Identify the first body of water that the substance reached. Identify the actual or estimated quantity of the substance(s) that entered that water body. Describe the location of any other water bodies that the substance(s) subsequently entered, including the actual or approximate distance from the Facility. In addition, state the actual or estimated quantity of the substance(s) that entered those additional water bodies.

9. Identify any storm drains or sewers through which the substances flowed, and identify the waters to which those storm drains or sewers subsequently drain. State the actual or estimated quantity of the substance(s) that entered the storm drain or sewer.

10. Identify whether each water identified in response to Questions 8 and 9 was, at the time of the spill, a "navigable water" as defined in *Enclosure 1*, a tributary of a navigable water; and/or physically connected to a navigable water. Identify all such navigable waters by name and identify the type of body of water (e.g. river, stream, lake, creek, or other type of body of water).

11. If no navigable waters are identified in response to Questions 8-10, identify whether the water system at any time connects with or flows into any hydrological system (such as a creek system). If so, identify the flow, extent, and duration of the connection to that system.

12. State the flow in cubic feet per second of each water body described in response to Questions 8 and 9. If there is no gauge station in the vicinity, please estimate the flow and provide the basis for that estimate.

13. Provide a description and the location of any adjoining shoreline upon which that substance may have reached. In addition, state the quantity of the substance that reached the adjoining shoreline.

14. For all discharges of <u>oil</u> to navigable waters, adjoining shorelines to navigable waters, or to any other water/shoreline, please indicate the following
    a. Did you observe from the oil a film, sheen, discoloration or iridescent appearance on the surface or shoreline of any water? If yes, please describe your observations;
    b. Did, to your knowledge, any other person observe from the oil a film, sheen, discoloration or iridescent appearance on the surface or shoreline of any water? If yes, please identify all such persons and describe those observations;
    c. Did you observe any oil sludge or oil emulsion beneath the surface or on the adjoining shorelines of any water? If yes, please describe your observations;
    d. Did, to your knowledge, any other person observe any oil sludge or oil emulsion to be deposited beneath the surface or on the adjoining shorelines of any water? If yes, please identify all such persons and describe those observations.

15. Describe any damage to animal life or vegetation that you observed or otherwise have knowledge of.

16. List the name, address, telephone number, and affiliation of any and all persons who made any observations in response to Questions 14 and 15.

17. Identify the effect of the spill(s) on any water supply and give details if available (e.g., shutdown of public or private water supply). Provide the names and addresses of all persons that have been provided with an alternative water supply (*e.g.*, bottled water) due to the spill or because of the threatened migration of contamination.

18. Does the facility have a National Pollutant Discharge Elimination System (NPDES) Permit or permit application? If yes, provide the permit number or, if no permit number has been issued at the time, the date upon which the application was filed.

19. If the substance(s) was discharged from an outfall, state whether the outfall was covered by an NPDES permit issued pursuant to Section 402 of the Act.

20. Identify all NPDES or state wastewater discharge permit conditions and/or water quality standards that may have been violated by the spill.

21. Provide a complete description of the cause or causes of the discharge (e.g., pump failure, by-pass of treatment system), as well as any other relevant circumstances. If the discharge was caused by the actions of a third party (for instance, as the result of an accident or vandalism), describe in detail the measures that were in place to prevent such actions. For vandalism, identify any enforcement agencies to which the owner or operator reported the vandalism.

22. Describe all steps taken to contain and clean up the spill(s) and to mitigate any environmental damage and/or threat to human health.

23. Describe any actions taken or planned to prevent the recurrence of incidents such as the release(s) identified above.

24. List the names, addresses, telephone numbers, and affiliations (*e.g.,* name of governmental agency, contractor, or other entity) of all persons who were on the scene during the incident and/or during cleanup operations, as well as any other persons not present but otherwise believed to have knowledge of the facts surrounding the incident or incidents. For each person identified in response to this question, provide the time period during which they were present at the facility. In responding to this question, for each complaint by an individual you have received related to your operations at the Facility, provide the person's name and phone number, as well as any written record of that complaint or a written narrative describing any oral complaint; Provide any subsequent communications with the party(ies) that filed the complaint.

25. Provide the date on which operations began at the Facility. Identify all Natural Gas Production Facilities (NGPFs) (as further defined in *Enclosure 1*) owned and/or operated by you connected to or otherwise associated with the Facility at any time. Identify all components of each NGPF, including but not limited to wells, piping, tanks, other equipment, and surface impoundments.

26. Provide the name(s) and address(es) of the owner(s) of the Facility described above in Question 25. In doing so, for all production facilities identified in response to Question 25, state the date that the owner obtained ownership and/or control over the production facilities and provide all documents evidencing or relating to such ownership, operation or lease, including but not limited to purchase and sale agreements, deeds, and leases.

27. Identify all drill pads and/or drill rigs owned and/or operated by you at or within 10 miles of the Facility at any time. For each drill pad and/or drill rig, identify the year on which that drill pad and/or rig was installed at its present location and *any* past location.

28. Provide the name and address of the operator(s) of the Facility described above in Question 25 and describe the relationship between the owner(s) and operator(s) (*i.e.*, employee, subcontractor, lessee, etc.). Identify any persons who concurrently with you exercised actual control or who held significant authority to control activities at the Facility at any time. In answering this question, include:
    a. Partners and/or joint ventures;
    b. Every contractor, subcontractor, or licensor with any presence or activity at the Facility (e.g., service contractors, remediation contractors, management and operator contractors, licensor providing technical support for licensed activities);
    c. All persons who exercised actual control over any activities or operations at the Facility;
    d. All persons who held significant authority to control any activities or operations at the Facility;
    e. All persons who had a significant presence or who conducted significant activities at the Facility;
    f. All government entities that had proprietary (as opposed to regulatory) interest or involvement with regard to the activity at the Facility.

29. Identify all prior owners and operators of the production facilities identified in response to Question 25 and the drill pads identified in response to Question 27. For each prior owner/operator, identify:
    a. The dates of installation, ownership, and/or operation;
    b. All evidence of the activities that were conducted at the production facilities and drill pads at that time, including but not limited to any information about wells installed, operated, and/or decommissioned during any period of prior ownership/operation;
    c. All integrity test results, materials inventories, and/or notifications and reports made to and received from local, state, and federal authorities; and
    d. Any information you have access to regarding the substances used in connection with the production facilities during any period of prior ownership/operation.

30. Describe the nature of the work conducted by you at each NGPF identified in response to Question 25. For each NGPF owned or operated by you, provide information on the installation, operation, and maintenance of those production facilities. Your response should include, but not be limited to the following for each well:
    a. The name or identifier of each well;
    b. Well construction information (including specifications on casing depths, cement tops/bottoms, and perforated zones);
    c. Well maintenance information (including logs and inspection records);
    d. Well incident information (including fluid loss during drilling or storage, cement loss, problems during hydraulic fracturing or other operations). Provide any root cause analysis conducted and corrective actions taken in response;
    e. Well lithologic logs (also known as "mud logs"); and
    f. The constituents contained in as well as the quantities of those constituents in any produced water, brine and/or, any other fluids associated with those wells.

31. Identify any contractors used by you that conducted any activities related to the wells identified in response to Question 30. For each contractor, identify:

a. The dates that they conducted work;
b. The nature of the work they conducted.

32. Identify any other leaks, spills, or releases of oil and/or hazardous substances into the environment that have occurred from the Facility. For each such release, provide the following:
    a. date;
    b. duration of the release;
    c. substance(s) released;
    d. the approximate quantity of the substance(s) released;
    e. the origin of the release;
    f. the cause of the release;
    g. the location of the release;
    h. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release;
    i. The result of any and all investigations of the circumstances, nature, extent or location of the release or threatened release, including the results of any soil and water (ground and surface) testing undertaken;
    j. Whether any persons were provided with an alternative water supply; and
    k. All persons with information related to these releases.

33. Provide any other reports, information or data related to activities conducted at or near the wells by you, your predecessors, contractors, and/or any other entity.

34. Provide a complete inventory of any compounds used at all NGPFs identified in response to Question 25. Include the chemical composition, characteristics, physical state of each compound, along with the MSDSs, CAS Numbers, and product names.

35. Provide all documents, reports, information, or data collected related to the substances placed into and taken from the wells possessed by you or any party related to you by contract or otherwise. Your response should include, but not be limited to:
    a. Analysis of production water constituents;
    b. Analysis of condensate constituents;
    c. Drilling fluid components (Material Safety Data Sheets (MSDSs), Chemical Abstract Systems (CAS) Numbers, product names;
    d. Water/geochemistry analysis from discrete production zones.
    e. Provide the following information (including any reports that include such information) related to the injection of substances into the wells by you or any other person, including but not limited to:
    f. Hydraulic fracturing fluid components (including MSDS, CAS Number, product names);
    g. Workover fluids (including all underlying components of workover fluids) (including MSDS, CAS Number, product names);
    h. Formation fracturing records for wells (including the depths and dates).

36. Provide all reports, data or other information related to soil, water (ground and surface) and geology/hydrogeology at and around the Site. Provide copies of all documents containing such data or information, including past and present aerial photographs as well

as documents containing the basis for and/or analysis or interpretation of that data or other information.

37. Describe the storage units at the Facility (*e.g.*, above ground tanks or underground tanks) and provide the types of substance(s) stored and the total storage capacity of each storage unit by name and CAS number. In answering this question, include substances and capacities of "oil-filled equipment" and "mobile refuelers" that are defined in *Enclosure 1*. Identify the storage units and provide the storage capacity of each unit identified with each NGPF and identify the types of substance(s) stored and the total storage capacity of each storage unit by name and CAS number for those units. In responding to this question, indicate whether each substance is an oil and/or a hazardous substance.

38. Has any contaminated soil ever been excavated or removed from areas around or near the wells? If so, provide the following:
    a. Amount of soil excavated;
    b. The substances contained in the excavated soil;
    c. Location of excavation;
    d. Distance from a navigable water of the United States or an adjoining shoreline;
    e. Description of the pathway from the excavated soil area to a navigable water of the US or an adjoining shoreline, including topography and an analysis of whether the materials could reach a navigable water or adjoining shoreline;
    f. Any information, including data, maps, and reports, related to any plume of substances associated with any soil excavation.

39. If the Owner or Operator has in place a Spill Prevention, Control and Countermeasures ("SPCC") Plan pursuant to 40 C.F.R. Part 112, a Facility Response Plan ("FRP") prepared pursuant to 40 C.F.R. § 112.20, a state oil spill prevention plan, and/or some other spill prevention plan, provide EPA with a copy of all such plans. Please indicate whether a professional engineer prepared and/or certified any plan in place at the Facility. In the event the plan is undated, provide the date(s) on which the plan was prepared and implemented.

40. Provide a description of all procedures used to prevent and/or contain spills of substances from the Facility. This description should indicate the tanks, tank cars, tank trucks, or other equipment that are protected by dikes, the amount of material that can be contained by each dike, and the number of tanks, tank cars, tank trucks, and other equipment protected by each dike.

41. Indicate the material used to construct each dike and the condition of each dike listed in Question 40.

42. In the event that the Owner or Operator does not have in place a SPCC Plan, FRP or state oil prevention plan, describe any actions taken or proposed to prevent the recurrence of any spill identified in response to Question 1.

43. List any other information you wish to bring to the attention of the federal government at this time related to this matter.

Certify the information provided in response to the above questions in the following manner:

I hereby certify the above to be true and accurate to the best of my knowledge.

Signature:_____
Name (Please print or type): _____
Title: _____
Telephone Number: _____

Your response should be mailed within **forty-five (45) days** of your receipt of this letter to:

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III
OIL AND PREVENTION BRANCH (3HS61)
1060 CHAPLINE STREET
WHEELING, WV 26003

This request for information is not subject to review by the Office of Management and Budget pursuant to the Paperwork Reduction Act, 44 U.S.C. §§ 3501-3520.

If you have any questions on this matter, please call Paula Curtin at (304) 234-0256.

Sincerely,

Karen Melvin, Associate Division Director
Office of Enforcement
Hazardous Site Cleanup Division

cc: Paula Curtin (3HS61)

ENCLOSURE 1: DEFINITIONS

Discharge: For purposes of Section 311 of the Act, a discharge to navigable waters or adjoining shorelines includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, but excludes certain discharges in compliance with a permit under Section 402 of the Act.

Drill Pad: Drill pad shall mean any drilling pad, platform, or other structure designed for use and/or actually used to drill for purposes of natural gas production, and shall include any and all equipment such as drill rigs, contained thereon.

Onshore facility: The term onshore facility shall mean any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land.

Offshore facility: The term offshore facility shall mean any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

Navigable Waters: Navigable waters of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes: (1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters; (2) Interstate waters; (3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and (4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

Mobile Refueler: Mobile refueler means a bulk storage container onboard a vehicle or towed, that is designed or used solely to store and transport fuel for transfer into or from an aircraft, motor vehicle, locomotive, vessel, ground service equipment, or other oil storage container.

Natural Gas Production Facility: Natural Gas Production Facility (NGPF) means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation equipment) used in the production, extraction, recovery, movement, stabilization, separation and/or treating of natural gas.

Oil-filled Operational Equipment: Oil-filled operational equipment means equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment (flow-through process). Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems (*e.g.*, those for pumps, compressors and other rotating equipment, including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device.

Well: The term means any well that is used for or is related to natural gas production.

GeoProbe ID	Maximum PID Reading (ppm)	Approx. Depth of Max PID Reading (ft. BGS)	Soils assessment
GP-1	0.0		Below Act 2 Standards
GP-2	42.9	6.0	Below Act 2 Standards
GP-3	12791.0	1.5	Above Act 2 Standards
GP-6	15000.0	8.0	Above Act 2 Standards
GP-7	12000.0	12.0	
GP-8	15000.0	13.0,15.0	Above Act 2 Standards
GP-9	15000.0	5.0	Above Act 2 Standards
GP-10	721.0	14.5	Above Act 2 Standards
GP-11	15000.0	14.5	Above Act 2 Standards
GP-12	0.0		Non-Detect PID readings
GP-13	0.0		Non-Detect PID readings
GP-14	0.0		Non-Detect PID readings
GP-15	15000.0	0.0	Above Act 2 Standards
GP-16	12.7	12.5	Below Act 2 Standards
GP-17	6067.0	11.5	Above Act 2 Standards
GP-18	0.0		Non-Detect PID readings
GP-19	0.0		Non-Detect PID readings
GP-20	7.1	10.0	Below Act 2 Standards
GP-21	12.5	13.0	Below Act 2 Standards
GP-22	65.0	6.5	Below Act 2 Standards
GP-24	0.0		Non-Detect PID readings
GP-25	15.6	3.0	Below Act 2 Standards
GP-26	12000.0	13.0 - 13.5	Above Act 2 Standards
GP-28	15000.0	14.0 - 15.0	Above Act 2 Standards
GP-27	12.3.0	12.0	Below Act 2 Standards
GP-28	0.0		Non-Detect PID readings
GP-29	0.0		Non-Detect PID readings
GP-30	0.0		Non-Detect PID readings
GP-31	0.0		Non-Detect PID readings
GP-32	0.0		Non-Detect PID readings
GP-33	0.0		Non-Detect PID readings
GP-34	10.2		Below Act 2 Standards
GP-35	0.0		Non-Detect PID readings
GP-36	0.0		Non-Detect PID readings
GP-37	0.0		Non-Detect PID readings
GP-38	0.0		Non-Detect PID readings
GP-39	0.0		Non-Detect PID readings
GP-40	0.0		Non-Detect PID readings
GP-41	0.0		Non-Detect PID readings
GP-42	44.1	4.0	Below Act 2 Standards
GP-43	7.5	7.5	Below Act 2 Standards
GP-44	9.8	4.5	Below Act 2 Standards
GP-45	0.0		Non-Detect PID readings
GP-46	15000.0	ambient air within completed borehole	Awaiting Analytical Results
GP-47	0.0		Non-Detect PID readings
GP-48	0.0		Non-Detect PID readings
GP-49	96.0	ambient air within completed borehole	Above Act 2 Standards
GP-50	80.0	14.5	Above Act 2 Standards
GP-51	75.0	ambient air within completed borehole	Awaiting Analytical Results
GP-52	12.0	ambient air within completed borehole	Above Act 2 Standards
GP-53	0.2	ambient air within completed borehole	Below Act 2 Standards
GP-54	0.0		Awaiting Analytical Results
GP-55	0.0		Awaiting Analytical Results
GP-56	0.0		Non-Detect PID readings
GP-57	0.0		Awaiting Analytical Results
GP-58	0.0		Non-Detect PID readings
GP-59	0.0		Awaiting Analytical Results
GP-60	3.4	2.5	Awaiting Analytical Results
GP-61	2647.0	1.5	Awaiting Analytical Results
GP-62	113.0	0.2	Awaiting Analytical Results
GP-63	980.0	4.5	Awaiting Analytical Results
GP-64	0.0		Non-Detect PID readings
GP-65	0.0		Awaiting Analytical Results
GP-66	0.0		Non-Detect PID readings
GP-67	0.0		Awaiting Analytical Results

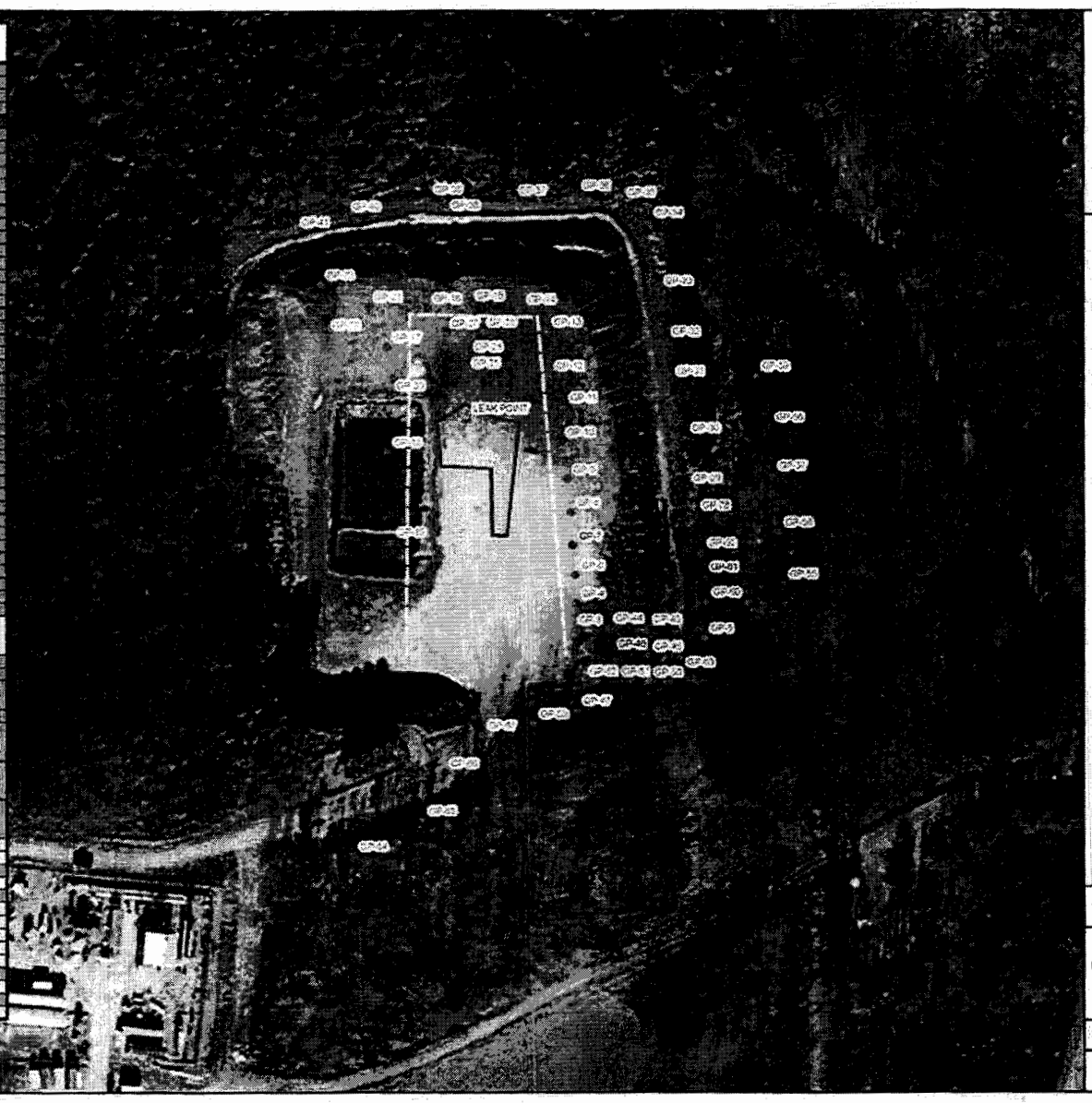

Figure 3

Chevron
Robinhill 16/18 Well Site
Geo-Probe

Robinson Twp,
Washington Co, Pennsylvania

Legend

Current Aprox. Well Pad Dimensions

Excavated Area

Leak

Geo-Probe Locations: Analytical Results and/or PID Readings Indicate Clean Soil w/r/t Act 2

Geo-Probe Locations: Analytical Results and/or PID Readings Indicate Contamination

Prepared for:
Chevron AMSBU

Map Reference:
This exhibit is based on the ESRI Aerial Imagery
USGS topographic 7.5' quadrangle
Clinton, PA

Scale: 1 inch = 100 feet

0 100 200
Feet

Job #: 12-049-JT

199 Johnson Road
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Moody

Drawn by	Checked by	Date	Revision
ADJ	JT	2/29/12	0

Table 1

Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS		DIRECT CONTACT	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10	Background
		TDS ≤ 2500: RESIDENTIAL		RESIDENTIAL											
		100 X GW MSC	GENERIC VALUE	0-15 FT.											
PERCENT TOTAL SOLIDS	%	---	---	---	77.45	75.31	85.80	73.99	69.25	82.09	81.22	75.18	72.73	73.24	82.08
SVOCS															
1,2,4-TRICHLOROBENZENE	mg/kg	7	27	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-DICHLOROBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	mg/kg	60	61	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	mg/kg	370	2,300	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	mg/kg	3.7	11	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	mg/kg	2	1	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	mg/kg	73	32	4,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROPHENOL	mg/kg	7.3	0.83	440	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROTOLUENE	mg/kg	0.21	0.05	58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	mg/kg	3.7	1.1	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLORONAPTHALENE	mg/kg	290	6,200	18,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROPHENOL	mg/kg	4	4.4	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYL-4,6-DINITROPHENOL	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLNAPTHALENE	mg/kg	15	600	880	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLPHENOL	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROANILINE	mg/kg	1.1	0.17	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROPHENOL	mg/kg	29	5.9	1800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	mg/kg	0.15	8.3	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-METHYLPHENOL	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-NITROANILINE	mg/kg	11	2	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-BROMOPHENYL-PHENYL ETHER	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLORO-3-METHYLPHENOL	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROANILINE	mg/kg	0.33	0.42	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4 CHLOROPHENYL-PHENYL ETHER	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYLPHENOL	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROANILINE	mg/kg	3.3	0.49	880	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROPHENOL	mg/kg	6	4.1	1800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPTHENE	mg/kg	220	2,700	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPTHYLENE	mg/kg	220	2,500	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANILINE	mg/kg	0.21	0.12	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANTHRACENE	mg/kg	6.6	350	66000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZOBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZIDINE	mg/kg	0.000093	0.12	0.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) ANTHRACENE	mg/kg	0.029	25	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) PYRENE	mg/kg	0.02	46	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (B) FLUORANTHENE	mg/kg	0.029	40	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (G,H,I) PERYLENE	mg/kg	0.026	180	13000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (K) FLUORANTHENE	mg/kg	0.055	610	57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZOIC ACID	mg/kg	15,000	2,900	190,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZYL ALCOHOL	mg/kg	1,800	650	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 1

Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS		DIRECT CONTACT	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10	Background
		TDS ≤ 2500: RESIDENTIAL		RESIDENTIAL											
		100 X GW MSC	GENERIC VALUE	0-15 FT.											
BIS (2-ETHYLHEXYL) PTHALATE	mg/kg	0.6	130	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	mg/kg	11	2.9	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHYL) ETHER	mg/kg	0.015	0.0045	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL) ETHER	mg/kg	30	8	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BUTYLBENZYLPHTHALATE	mg/kg	35	3,000	9,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBAZOLE	mg/kg	3.3	21	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHRYSENE	mg/kg	0.19	230	570	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZ (A,H) ANTHRACENE	mg/kg	0.0029	13	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZOFURAN	mg/kg	3.7	95	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	mg/kg	2,900	910	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIMETHYL PHTHALATE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	mg/kg	370	1500	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-OCTYL PHTHALATE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORANTHENE	mg/kg	26	3200	8800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORENE	mg/kg	150	3,000	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/kg	0.1	0.96	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	mg/kg	0.9	10	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	mg/kg	5	91	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROETHANE	mg/kg	0.1	0.56	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
INDENO (1,2,3-CD) PYRENE	mg/kg	0.029	2200	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPHORONE	mg/kg	10	1.9	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPTHALENE	mg/kg	10	25	4400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITROBENZENE	mg/kg	7.3	3.2	440	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITROSODIPHENYLAMINE	mg/kg	13	20	3700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-NITROSO-DI-N-PROPYLAMINE	mg/kg	0.0094	0.0013	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	mg/kg	0.1	5	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENANTHRENE	mg/kg	110	10,000	66,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENOL	mg/kg	200	33	66,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRENE	mg/kg	13	2200	6600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRIDINE	mg/kg	3.7	0.41	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCS															
04) BROMODICHLOROMETHANE	mg/kg	8	2.7	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
05) BROMOFORM	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
06) BROMOMETHANE	mg/kg	1	0.54	96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
07) N-BUTYLBENZENE	mg/kg	150	950	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
08) SEC-BUTYLBENZENE	mg/kg	150	350	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
09) TERT-BUTYLBENZENE	mg/kg	150	270	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1) BENZENE	mg/kg	0.5	0.13	57	ND	ND	0.98	ND	ND	0.07	ND	ND	0.09	ND	ND
10) CARBON TETRACHLORIDE	mg/kg	0.5	0.26	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100) 4-CHLOROTOLUENE	mg/kg	10	20	4400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11) CHLOROBENZENE	mg/kg	10	6.1	960	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12) CHLORODIBROMOMETHANE	mg/kg	8	2.5	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13) CHLOROEHTANE	mg/kg	23	5	6200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 1
Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS		DIRECT CONTACT	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10	Background
		TDS ≤ 2500: RESIDENTIAL		RESIDENTIAL											
		100 X GW MSC	GENERIC VALUE	0-15 FT.											
14) CHLOROFORM	mg/kg	8	2	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
15)CHLOROMETHANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
16) 2-CHLOROTOLUENE	mg/kg	10	20	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
18) 1,2 DIBROMO-3-CHLOROPROPANE (DBCP)	mg/kg	0.02	0.0092	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2) BROMOBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20) DIBROMOMETHANE	mg/kg	37	14	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
21) 1,2-DICHLOROBENZENE	mg/kg	60	59	3800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
22) 1,3-DICHLOROBENZENE	mg/kg	60	61	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
23) 1,4-DICHLOROBENZENE	mg/kg	7.5	10	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
24) DICHLORODIFLUOROMETHANE	mg/kg	100	100	3,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
25) 1,1-DICHOLOROETHANE	mg/kg	3.1	0.75	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
26) 1,2- DICHLOROETHANE	mg/kg	0.5	0.1	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
27) 1,1-DICHLOROETHENE	mg/kg	0.7	0.19	3800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28) CIS-1,2-DICHLOROETHENE	mg/kg	7	1.6	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29) TRANS-1,2-DICHLOROETHENE	mg/kg	10	2.3	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30) METHYLENE CHLORIDE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31) 1,2-DICHLOROPROPANE	mg/kg	0.5	0.11	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32) 1,3-DICHLOROPROPANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33) 2,2-DICHLOROPROPANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34) 1,1-DICHLOROPROPENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
35) CIS 1,3-DICHLOROPROPENE	mg/kg	0.66	0.12	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36) TRANS 1,3 DICHLOROPROPENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
37) ETHYLBENZENE	mg/kg	70	46	10000	ND	ND	0.42	ND	ND	ND	ND	ND	0.07	ND	ND
38) HEXACHLOROBUTADIENE	mg/kg	0.9	10	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
39) ISOPROPYLBENZENE	mg/kg	84	600	7,700	ND	ND	0.06	ND	ND	ND	ND	ND	ND	ND	ND
40) P-ISOPROPYLTOLUENE	mg/kg	---	---	---	ND	ND	0.32	ND	0.19	ND	ND	ND	0.16	ND	ND
41) NAPTHALENE	mg/kg	10	25	4400	0.09	ND	ND	ND	ND	ND	ND	ND	ND	0.12	0.27
42) N-PROPYLBENZENE	mg/kg	150	290	8,800	ND	ND	0.98	ND	ND	ND	ND	ND	ND	ND	ND
43) STYRENE	mg/kg	10	24	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
44) 1,1,1,2-TETRACHLOROETHANE	mg/kg	7	18	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45) 1,1,2,2-THETRACHLOROETHANE	mg/kg	0.08	0.026	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
46) TETRACHLOROETHENE (PCE)	mg/kg	0.5	0.43	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
47) TOLUENE	mg/kg	100	44	10,000	ND	ND	3.17	ND	0.18	0.17	ND	0.21	0.62	0.27	0.11
48) 1,2,3-TRICHLOROBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
49) 1,2,4-TRICHLOROBENZENE	mg/kg	7	27	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50) 1,1,1-TRICHLOROETHANE (TCA)	mg/kg	20	7.2	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
51) 1,1,2-TRICHLOROETHANE	mg/kg	0.5	0.15	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
52) TRICHLOROETHENE (TCE)	mg/kg	0.5	0.17	260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
53) TRICHLOROFLUOROMETHANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
54) 1,2,3-TRICHLOROPROPANE	mg/kg	18	3.1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
55) 1,2,4 TRIMETHYLBENZENE	mg/kg	1.5	8.4	130	ND	0.09	3.16	ND	0.11	0.15	0.10	0.11	1.34	0.16	0.13
56) 1,3,5-TRIMETHYLBENZENE	mg/kg	1.3	2.3	110	ND	0.10	2.57	ND	ND	0.23	0.12	0.11	1.26	0.13	ND
57) VINYL CHLORIDE	mg/kg	0.2	0.027	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 1

Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL 100 X GW MSC	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL GENERIC VALUE	DIRECT CONTACT RESIDENTIAL 0-15 FT.	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10	Background
58) M+P-XYLENE	mg/kg	1,000	990	1,900	ND	0.18	7.00	ND	0.26	0.43	ND	0.36	3.01	0.48	0.20
60) O-XYLENE	mg/kg	1,000	990	1,900	ND	ND	1.38	ND	0.12	0.12	ND	0.08	0.51	0.13	0.13
A05) METHYL TERT BUTYL ETHER (MTBE)	mg/kg	2	0.26	1700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A08) ACETONE	mg/kg	3,300	370	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34
A12) ACRYLONITRILE	mg/kg	0.072	0.01	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A13) ACROLIEN	mg/kg	0.0042	0.00047	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A18) 2-BUTANONE (MEK)	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A32) 2-CHLOROETHYL VINYL ETHER	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A36) HEXANONE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A37) 4-METHYL-2-PENANONE (MIBK)	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A53) 1,2,3-TRIMETHYLBENZENE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Detected Concentration

Concentration Exceeds Act 2 Standard

Table 2

Robinhill 16H Site Characterization - Surface Water Sample Analyses (vs. PADEP Act 2 Statewide Health Standards and Secondary Drinking Water Standards)

REGULATED SUBSTANCE	Units	USED AQUIFERS TDS ≤ 2500 R	USED AQUIFERS TDS ≤ 2500 NR	SW-1 (2/13/12)	SW-2 (2/13/12)	SW-3 (2/17/12)	SW-4 (2/17/12)	SW-5 (2/17/12)	SW-6 (2/17/12)	SW-7 (2/17/12)	SW-8 (2/17/12)	SW-9 (2/17/12)	SW-10 (2/17/12)	SW-11 (2/17/12)	SW-12 (2/17/12)	SW-13 (2/17/12)	SW-14 (2/17/12)	Pond 1	Pond 2	SW-Background (2/13/12)
METALS																				
ARSENIC	µg/l	10	10			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
BARIUM	µg/l	2,000	2,000			7.0	11.0	20.0	10.0	9.0	88.0	24.0	45.0	29.0	25.0	114.0	19.0	23.0	14.0	
CADMIUM	µg/l	5	5			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
CHROMIUM	µg/l	100	100			ND	ND	ND	ND	ND	ND	ND	ND	6.0	ND	ND	ND	ND	ND	
LEAD	µg/l	5	5			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MERCURY	µg/l	2	2			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SELENIUM	µg/l	50	50			ND	14.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SILVER	µg/l	100	100			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SVOCS																				
1,2,4-TRICHLOROBENZENE	µg/l	70	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-DICHLOROBENZENE	µg/l	600	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	µg/l	600	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	µg/l	75	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	µg/l	3,700	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	µg/l	37	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	µg/l	20	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	µg/l	730	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROTOLUENE	µg/l	2.1	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	µg/l	37	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLORONAPTHALENE	µg/l	2,900	8,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROPHENOL	µg/l	40	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYL-4,6-DINITROPHENOL	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLNAPTHALENE	µg/l	150	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLPHENOL	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROANILINE	µg/l	11	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROPHENOL	µg/l	290	820	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	µg/l	1.5	5.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-METHYLPHENOL	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-NITROANILINE	µg/l	110	310	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-BROMOPHENYL-PHENYL ETHER	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYLPHENOL	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROANILINE	µg/l	33	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROPHENOL	µg/l	60	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPTHENE	µg/l	2,200 G	3,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPTHYLENE	µg/l	2,200 G	6,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANILINE	µg/l	2.1	8.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANTHRACENE	µg/l	68	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZOBENZENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZIDINE	µg/l	0.00293	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) ANTHRACENE	µg/l	0.29	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) PYRENE	µg/l	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (B) FLUORANTHENE	µg/l	0.29	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (G,H,I) PERYLENE	µg/l	0.26	0.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (K) FLUORANTHENE	µg/l	0.55	0.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZOIC ACID	µg/l	150,000	410,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZYL ALCOHOL	µg/l	18,000	51,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-ETHYLHEXYL) PTHALATE	µg/l	6	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	µg/l	110	310	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHYL) ETHER	µg/l	0.15	0.76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL) ETHER	µg/l	300	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BUTYLBENZYLPHTHALATE	µg/l	350	1,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBAZOLE	µg/l	33	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHRYSENE	µg/l	1.9	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZ (A,H) ANTHRACENE	µg/l	0.029	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2

Robinhill 15H Site Characterization - Surface Water Sample Analyses (vs. PADEP Act 2 Statewide Health Standards and Secondary Drinking Water Standards)

REGULATED SUBSTANCE	Units	USED AQUIFERS TDS ≤ 2500 R	USED AQUIFERS TDS ≤ 2500 NR	SW-1 (2/13/12)	SW-2 (2/13/12)	SW-3 (2/17/12)	SW-4 (2/17/12)	SW-5 (2/17/12)	SW-6 (2/17/12)	SW-7 (2/17/12)	SW-8 (2/17/12)	SW-9 (2/17/12)	SW-10 (2/17/12)	SW-11 (2/17/12)	SW-12 (2/17/12)	SW-13 (2/17/12)	SW-14 (2/17/12)	Pond 1	Pond 2	SW-Background (2/13/12)
DIBENZOFURAN	µg/l	37	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	µg/l	29,000	82,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
DIMETHYL PHTHALATE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	µg/l	3,700	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
DI-N-OCTYL PHTHALATE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORANTHENE	µg/l	260	260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORENE	µg/l	1,500	1,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	µg/l	850	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	µg/l	50	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
INDENO (1,2,3-CD) PYRENE	µg/l	0.29	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPHORONE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
NAPTHALENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
NITROBENZENE	µg/l	73	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITROSODIPHENYLAMINE	µg/l	130	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-NITROSO-DI-N-PROPYLAMINE	µg/l	0.094	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENANTHRENE	µg/l	1,100	1,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENOL	µg/l	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRENE	µg/l	130	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRIDINE	µg/l	37	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCS																				
03) BROMOCHLOROMETHANE	µg/l	90	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
04) BROMOCHLOROMETHANE	µg/l	90	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
05) BROMOFORM	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
06) BROMOMETHANE	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
07) N-BUTYLBENZENE	µg/l	1,500	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
08) SEC-BUTYLBENZENE	µg/l	1,500	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
09) TERT-BUTYLBENZENE	µg/l	1,500	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
1) BENZENE	µg/l	5	5	ND	ND	ND	ND	ND	ND	4,900	ND	ND	ND	11,400	ND	NC	ND	ND	ND	ND
10) CARBON TETRACHLORIDE	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
100) 4-CHLOROTOLUENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
11) CHLOROBENZENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
12) CHLORODIBROMOMETHANE	µg/l	80	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
13) CHLOROETHANE	µg/l	230	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
14) CHLOROFORM	µg/l	80	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
15)CHLOROMETHANE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
16) 2-CHLOROTOLUENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
18) 1,2 DIBROMO-3-CHLOROPROPANE (DBCP	µg/l	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
2) BROMOBENZENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
20) DIBROMOMETHANE	µg/l	370	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
21) 1,2-DICHLOROBENZENE	µg/l	600	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
22) 1,3-DICHLOROBENZENE	µg/l	600	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
23) 1,4-DICHLOROBENZENE	µg/l	75	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
24) DICHLORODIFLUOROMETHANE	µg/l	1,00	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
25) 1,1-DICHLOROETHANE	µg/l	31	160	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND
26) 1,2- DICHLOROETHANE	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND

Table 2

Robinhill 15H Site Characterization - Surface Water Sample Analyses (vs. PADEP Act 2 Statewide Health Standards and Secondary Drinking Water Standards)

REGULATED SUBSTANCE	Units	USED AQUIFERS TDS ≤ 2500 R	USED AQUIFERS TDS ≤ 2500 NR	SW-1 (2/13/12)	SW-2 (2/13/12)	SW-3 (2/17/12)	SW-4 (2/17/12)	SW-5 (2/17/12)	SW-6 (2/17/12)	SW-7 (2/17/12)	SW-8 (2/17/12)	SW-9 (2/17/12)	SW-10 (2/17/12)	SW-11 (2/17/12)	SW-12 (2/17/12)	SW-13 (2/17/12)	SW-14 (2/17/12)	Pond 1	Pond 2	SW-Background (2/13/12)
27) 1,1-DICHLOROETHENE	µg/l	7	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28) CIS-1,2-DICHLOROETHENE	µg/l	70	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29) TRANS-1,2-DICHLOROETHENE	µg/l	100 M	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30) METHYLENE CHLORIDE	µg/l	30 H	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31) 1,2-DICHLOROPROPANE	µg/l	5 M	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32) 1,3-DICHLOROPROPANE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33) 2,2-DICHLOROPROPANE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34) 1,1-DICHLOROPROPENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
35) CIS 1,3-DICHLOROPROPENE	µg/l	8.6	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36) TRANS 1,3 DICHLOROPROPENE	µg/l	8.6	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
37) ETHYLBENZENE	µg/l	700	700	ND	ND	ND	ND	ND	ND	2,360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
38) HEXACHLOROBUTADIENE	µg/l	8.5	33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
39) ISOPROPYLBENZENE	µg/l	840	3,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40) P-ISOPROPYLTOLUENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
41) NAPTHALENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
42) N-PROPYLBENZENE	µg/l	1,500	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
43) STYRENE	µg/l	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
44) 1,1,1,2-TETRACHLOROETHANE	µg/l	70	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45) 1,1,2,2-THETRACHLOROETHANE	µg/l	0.84	7.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
46) TETRACHLOROETHANE (PCE)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
47) TOLUENE	µg/l	1,000	1,000	ND	ND	ND	ND	ND	ND	14,850	ND	2,000	ND	ND	ND	ND	ND	ND	ND	ND
48) 1,2,3-TRICHLOROBENZENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
49) 1,2,4-TRICHLOROBENZENE	µg/l	70	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50) 1,1,1-TRICHLOROETHANE (TCA)	µg/l	200	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
51) 1,1,2-TRICHLOROETHANE	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
52) TRICHLOROETHENE	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
53) TRICHLOROFLUOROMETHANE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
54) 1,2,3-TRICHLOROPROPANE	µg/l	40	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
55) 1,2,4 TRIMETHYLBENZENE	µg/l	13	53	ND	ND	ND	ND	ND	ND	7,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
56) 1,3,5-TRIMETHYLBENZENE	µg/l	5	5	ND	ND	ND	ND	ND	ND	6,110	ND	ND	ND	ND	ND	1,650	ND	ND	ND	ND
57) VINYL CHLORIDE	µg/l	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
58) M+P-XYLENE	µg/l	10,000	10,000	ND	ND	ND	ND	ND	ND	23,340	ND	ND	ND	ND	ND	2,530	ND	ND	ND	ND
59) O-XYLENE	µg/l	10,000	10,000	ND	ND	ND	ND	ND	ND	5,470	ND	ND	ND	ND	ND	2,140	ND	ND	ND	ND
A05) METHYL TERT BUTYL ETHER (MTBE)	µg/l	20	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A08) ACETONE	µg/l	33,000	92,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,440	2,400	ND	ND	ND	ND
A12) ACRYLONITRILE	µg/l	0.72	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A13) ACROLIEN	µg/l	0.042	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A15) 2-BUTANONE (MEK)	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,260	ND	ND	ND	ND	ND
A32) 2-CHLOROETHYL VINYL ETHER	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A36) HEXANONE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A37) 4-METHYL-2-PENANONE (MIBK)	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A53) 1,2,3-TRIMETHYLBENZENE	µg/l	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICS																				
BUTANE	µg/L	---	---	ND	ND														ND	ND
DECANE	µg/L	---	---	ND	ND														ND	ND
UNDECANE	µg/L	---	---	ND	ND														ND	ND
DODECANE	µg/L	---	---	ND	ND														ND	ND

* Secondary Drinking Water Standard

Detected Concentration

Concentration Exceeds Act 2 Standard

Table 3
Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012 - February 15, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS		DIRECT CONTACT	GP-3 (comp.)	GP-4 (4' - 8')	GP-5 (1.5' - 2.0')	GP-6 (4' - 8')	GP-7 (12' - 16')	GP-8 (12' - 16')	GP-9 (4' - 8')	GP-10 (12' - 16')	GP-11 (12' - 16')	GP-15 (4' - 8')	GP-16 (12' - 16')	GP-17 (comp.)	GP-20 (5' - 10.5')	GP-21 (8' - 12')	GP-22 (4' - 8')	GP-25 (12' - 16')	GP-26 (12' - 16')	GP-27 (8' - 12')	Background
		TDS ≤ 2500: RESIDENTIAL		RESIDENTIAL																			
		100 X GW MSC	GENERIC VALUE	0-15 FT.																			
PERCENT TOTAL SOLIDS	%	—	—	—	85.22	94.67	71.58	94.39	88.92	89.64	75.92	85.58	74.77	78.73	76.03	93.02	90.73	81.90	83.78	85.88	89.12	84.61	82.06
SVOCS																							
1,2,4-TRICHLOROBENZENE	mg/kg	7	27	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-DICHLOROBENZENE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	mg/kg	90	91	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	mg/kg	370	2,300	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	mg/kg	3.7	11	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	mg/kg	2	1	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	mg/kg	73	32	4,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROPHENOL	mg/kg	7.3	0.53	440	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROTOLUENE	mg/kg	0.21	0.05	58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	mg/kg	3.7	1.1	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLORONAPTHALENE	mg/kg	290	6,200	18,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROPHENOL	mg/kg	4	4.4	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYL-4,6-DINITROPHENOL	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLNAPTHALENE	mg/kg	15	600	830	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-METHYLPHENOL	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROANILINE	mg/kg	1.1	0.17	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-NITROPHENOL	mg/kg	29	5.9	1800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	mg/kg	0.15	8.3	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-METHYLPHENOL	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-NITROANILINE	mg/kg	11	2	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-BROMOPHENYL-PHENYL ETHER	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLORO-3-METHYLPHENOL	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROANILINE	mg/kg	0.33	0.42	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROPHENYL-PHENYL ETHER	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-METHYLPHENOL	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROANILINE	mg/kg	3.3	0.49	880	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-NITROPHENOL	mg/kg	9	4.1	1800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPTHENE	mg/kg	220	2,700	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACENAPHTYLENE	mg/kg	220	2,500	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANILINE	mg/kg	0.21	0.12	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANTHRACENE	mg/kg	0.5	350	66000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZOBENZENE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZIDINE	mg/kg	0.000003	0.12	0.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) ANTHRACENE	mg/kg	0.029	25	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (A) PYRENE	mg/kg	0.02	46	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (B) FLUORANTHENE	mg/kg	0.029	40	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (G,H,I) PERYLENE	mg/kg	0.029	180	13000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO (K) FLUORANTHENE	mg/kg	0.095	610	57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZOIC ACID	mg/kg	15,000	2,900	190,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZYL ALCOHOL	mg/kg	1,900	650	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-ETHYLHEXYL) PTHALATE	mg/kg	0.6	130	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	mg/kg	11	2.9	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHYL) ETHER	mg/kg	0.015	0.0045	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL) ETHER	mg/kg	30	8	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BUTYLBENZYLPHTHALATE	mg/kg	35	3,000	9,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBAZOLE	mg/kg	3.3	21	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHRYSENE	mg/kg	0.19	230	570	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZ (A,H) ANTHRACENE	mg/kg	0.0029	13	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBENZOFURAN	mg/kg	3.7	95	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	mg/kg	2,900	910	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIMETHYL PHTHALATE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	mg/kg	370	1600	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-OCTYL PHTHALATE	mg/kg	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORANTHENE	mg/kg	26	3200	9800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORENE	mg/kg	150	3,000	8,600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/kg	0.1	0.96	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	mg/kg	0.9	10	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	mg/kg	5	91	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROETHANE	mg/kg	0.1	0.56	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012 - February 15, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL 100 X GW MSC	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL GENERIC VALUE	DIRECT CONTACT RESIDENTIAL 0-15 FT.	GP-3 (comp.)	GP-4 (4' - 8')	GP-5 (16' - 20')	GP-6 (4' - 8')	GP-7 (12' -16')	GP-8 (12' - 16')	GP-9 (4' - 8')	GP-10 (12' -16')	GP-11 (12' -16')	GP-15 (4' - 8')	GP-16 (12' -16')	GP-17 (comp.)	GP-20 (5' - 10.5')	GP-21 (8' - 12')	GP-22 (4' - 8')	GP-25 (12' -16')	GP-26 (12' -16')	GP-27 (8' - 12')	Background
INDENO (1,2,3-CD) PYRENE	mg/kg	0.029	2200	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPHORONE	mg/kg	10	1.9	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPTHALENE	mg/kg	10	25	4400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITROBENZENE	mg/kg	7.3	3.7	440	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITROSODIPHENYLAMINE	mg/kg	13	20	3700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-NITROSO-DI-N-PROPYLAMINE	mg/kg	0.0094	0.0013	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	mg/kg	0.1	5	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENANTHRENE	mg/kg	110	10,000	66,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHENOL	mg/kg	200	33	66,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRENE	mg/kg	13	2200	6600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PYRIDINE	mg/kg	3.7	0.41	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCS																							
04) BROMODICHLOROMETHANE	mg/kg	8	2.7	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
05) BROMOFORM	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
06) BROMOMETHANE	mg/kg	1	0.54	96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
07) N-BUTYLBENZENE	mg/kg	150	956	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
08) SEC-BUTYLBENZENE	mg/kg	150	359	8,800	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
09) TERT-BUTYLBENZENE	mg/kg	150	270	8,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1) BENZENE	mg/kg	0.5	0.13	97	ND	ND	ND	ND	0.25	0.27	ND	ND	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10) CARBON TETRACHLORIDE	mg/kg	0.5	0.26	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100) 4-CHLOROTOLUENE	mg/kg	10	20	4400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11) CHLOROBENZENE	mg/kg	10	6.1	960	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12) CHLORODIBROMOMETHANE	mg/kg	8	2.5	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13) CHLOROETHANE	mg/kg	23	9	6200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
14) CHLOROFORM	mg/kg	8	2	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
15)CHLOROMETHANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
16) 2-CHLOROTOLUENE	mg/kg	10	20	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
18) 1,2 DIBROMO-3-CHLOROPROPANE (DBCP)	mg/kg	0.02	0.0092	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2) BROMOBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20) DIBROMOMETHANE	mg/kg	37	14	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
21) 1,2-DICHLOROBENZENE	mg/kg	60	59	3800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
22) 1,3-DICHLOROBENZENE	mg/kg	60	61	660	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
23) 1,4-DICHLOROBENZENE	mg/kg	7.5	10	43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
24) DICHLORODIFLUOROMETHANE	mg/kg	100	100	3,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
25) 1,1-DICHLOROETHANE	mg/kg	3.1	0.75	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
26) 1,2- DICHLOROETHANE	mg/kg	0.5	0.1	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
27) 1,1-DICHLOROETHENE	mg/kg	0.7	0.19	3800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28) CIS-1,2-DICHLOROETHENE	mg/kg	7	1.6	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29) TRANS-1,2-DICHLOROETHENE	mg/kg	10	2.3	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30) METHYLENE CHLORIDE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31) 1,2-DICHLOROPROPANE	mg/kg	0.5	0.11	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32) 1,3-DICHLOROPROPANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33) 2,2-DICHLOROPROPANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34) 1,1-DICHLOROPROPENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
35) CIS 1,3-DICHLOROPROPENE	mg/kg	0.66	0.12	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36) TRANS 1,3 DICHLOROPROPENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
37) ETHYLBENZENE	mg/kg	70	46	10000	ND	ND	ND	ND	0.74	0.46	ND	ND	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
38) HEXACHLOROBUTADIENE	mg/kg	0.9	10	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
39) ISOPROPYLBENZENE	mg/kg	84	600	7,700	ND	ND	ND	ND	0.27	0.15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40) P-ISOPROPYLTOLUENE	mg/kg	---	---	---	ND	ND	ND	ND	0.36	0.16	ND	ND	ND	ND	0.81	ND	ND	ND	ND	ND	ND	ND	ND
41) NAPTHALENE	mg/kg	10	25	4400	ND	ND	ND	ND	ND	ND	0.22	ND	ND	0.19	0.14	ND	0.12	ND	ND	ND	ND	ND	0.27
42) N-PROPYLBENZENE	mg/kg	150	290	8,800	ND	ND	ND	ND	0.37	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
43) STYRENE	mg/kg	10	24	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
44) 1,1,1,2-TETRACHLOROETHANE	mg/kg	7	18	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45) 1,1,2,2-THETRACHLOROETHANE	mg/kg	0.68	0.026	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
46) TETRACHLOROETHENE (PCE)	mg/kg	0.5	0.43	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
47) TOLUENE	mg/kg	100	44	10,000	ND	ND	0.06	ND	3.21	2.92	0.29	0.15	0.86	0.21	ND	ND	ND	ND	ND	ND	ND	ND	0.11
48) 1,2,3-TRICHLOROBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
49) 1,2,4-TRICHLOROBENZENE	mg/kg	7	27	2200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50) 1,1,1-TRICHLOROETHANE (TCA)	mg/kg	20	7.2	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
51) 1,1,2-TRICHLOROETHANE	mg/kg	0.5	0.15	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
52) TRICHLOROETHENE (TCE)	mg/kg	3.5	0.17	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

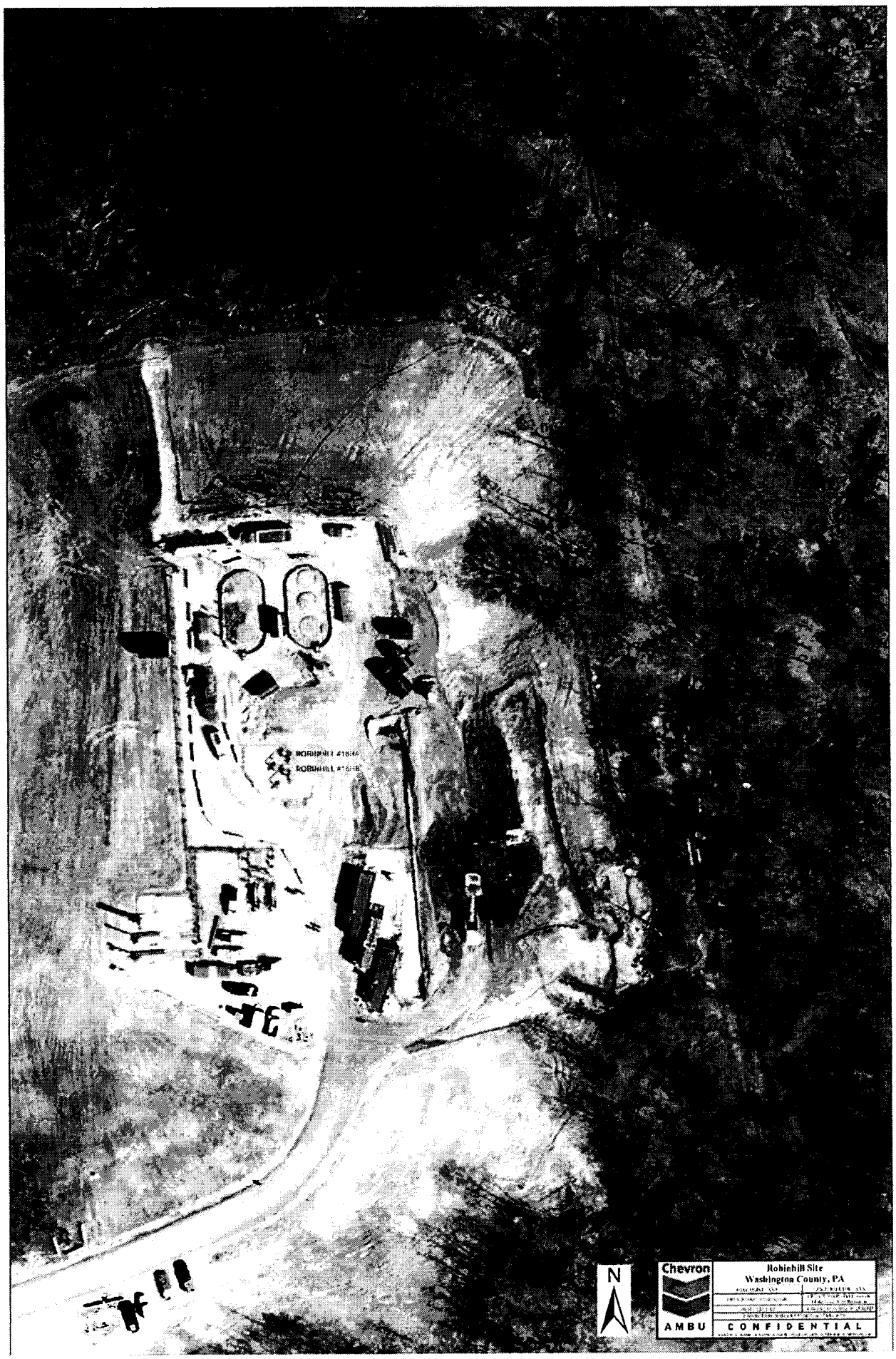
Table 3

Robinhill 15H Site Characterization - Soil Sample Analyses (vs. PADEP Act 2 Statewide Health Standards): February 13, 2012 - February 15, 2012

REGULATED SUBSTANCE	Units	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL 100 X GW MSC	SOIL TO GW USED AQUIFERS TDS ≤ 2500: RESIDENTIAL GENERIC VALUE	DIRECT CONTACT RESIDENTIAL 0-15 FT.	GP-3 (comp.)	GP-4 (4' - 8')	GP-5 (1.5' - 2.0')	GP-6 (4' - 8')	GP-7 (12' - 16')	GP-8 (12' - 16')	GP-9 (4' - 8')	GP-10 (12' -16')	GP-11 (12' -16')	GP-15 (4' - 8')	GP-16 (12' -16')	GP-17 (comp.)	GP-20 (5' - 10.5')	GP-21 (8' - 12')	GP-22 (4' - 8')	GP-25 (12' -16')	GP-26 (12' -16')	GP-27 (8' - 12')	Background
53) TRICHLOROFLUOROMETHANE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
54) 1,2,3-TRICHLOROPROPANE	mg/kg	18	3.1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
55) 1,2,4 TRIMETHYLBENZENE	mg/kg	1.6	8.4	190	ND	ND	ND	ND	3.93	1.79	0.12	0.09	0.51	0.13	ND	ND	ND	ND	ND	ND	0.06	ND	0.13
56) 1,3,5-TRIMETHYLBENZENE	mg/kg	1.5	2.3	110	ND	ND	ND	ND	3.48	1.64	ND	0.08	0.43	0.09	ND	ND	ND	ND	ND	ND	0.05	ND	ND
57) VINYL CHLORIDE	mg/kg	3.7	0.027	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
58) M-P-XYLENE	mg/kg	1,900	990	1,900	ND	ND	ND	ND	8.56	5.42	0.39	0.22	1.38	0.36	ND	ND	ND	ND	ND	ND	ND	ND	0.20
60) O-XYLENE	mg/kg	1,000	990	1,900	ND	ND	ND	ND	1.57	0.97	0.15	ND	0.23	0.15	ND	ND	0.08	ND	ND	ND	ND	ND	0.13
A05) METHYL TERT BUTYL ETHER (MTBE)	mg/kg	2	0.29	1700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A08) ACETONE	mg/kg	3,300	370	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34
A12) ACRYLONITRILE	mg/kg	0.072	0.51	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A13) ACROLEIN	mg/kg	0.00e2	0.00047	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A18) 2-BUTANONE (MEK)	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A32) 2-CHLOROETHYL VINYL ETHER	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A36) HEXANONE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A37) 4-METHYL-2-PENANONE (MIBK)	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A53) 1,2,3-TRIMETHYLBENZENE	mg/kg	---	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Detected Concentration

Concentration Exceeds Act 2 Standard


N
Chevron
AMBU
Robinhill Site
Washington County, PA
CONFIDENTIAL

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

NATURAL GAS CONDENSATE - Appalachia

Company Identification
Appalachian/Michigan Business Unit
Chevron North America Exploration and Production Company (a division of Chevron U.S.A. Inc.)
1550 Coraopolis Heights Road
Moon Township, PA 15108
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
Product Information: (412) 865-3408

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Natural gas condensates	64741-47-5	100 %wt/wt
Hexane	110-54-3	5 - 7 %wt/wt
Toluene (methylbenzene)	108-88-3	2 - 5 %wt/wt
Xylene	1330-20-7	2 - 5 %wt/wt
Ethylbenzene	100-41-4	< 0.5 %wt/wt
Benzene	71-43-2	< 0.1 %wt/wt

SECTION 3 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW

- FLAMMABLE LIQUID AND VAPOR
- CAUSES EYE IRRITATION
- CAUSES SKIN IRRITATION
- MAY CAUSE RESPIRATORY TRACT IRRITATION IF INHALED
- MAY CAUSE LUNG DAMAGE IF SWALLOWED
- MAY CAUSE DIZZINESS, DROWSINESS AND REDUCED ALERTNESS
- CONTAINS MATERIAL THAT MAY CAUSE HARM TO THE UNBORN CHILD
- CONTAINS MATERIAL THAT MAY CAUSE GENETIC DEFECTS
- CONTAINS MATERIAL THAT MAY CAUSE DAMAGE TO:

- NERVOUS SYSTEM
- HARMFUL TO AQUATIC ORGANISMS. MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

****

IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the eye and upper respiratory tract.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause harm to the unborn child if inhaled above the recommended exposure limit.

Cancer: Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Genetic Toxicity: Contains material that may cause heritable genetic damage based on animal data.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Nervous System

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, apply a waterless hand cleaner, mineral oil, or petroleum jelly. Then wash with soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid.

NFPA RATINGS: Health: 1 Flammability: 4 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: -21 °C (-6 °F) (Estimated)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: No data available Upper: No data available

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use water spray or a direct stream of water.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above -10C (15F). Do not get in eyes, on skin, or on clothing. Do not breathe vapor or fumes from heated material. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and

drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.
General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits. Use explosion-proof ventilation equipment.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Nitrile Rubber, Silver Shield, Viton.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
Determine if airborne concentrations of Benzene and Oil Mist are below their respective occupational exposure limits for jurisdication of use. If airborne concentrations are not below the acceptable concentration wear a NIOSH approved respirator in consideration of actual airborne concentrations. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA SRS	1 ppm	5 ppm	--	--

		(weight)	(weight)		
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Ethylbenzene	ACGIH	100 ppm (weight)	125 ppm (weight)	--	A3
Ethylbenzene	OSHA Z-1	435 mg/m3	--	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Toluene (methylbenzene)	ACGIH	50 ppm (weight)	--	--	Skin A4
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene	ACGIH	100 ppm (weight)	150 ppm (weight)	--	A4
Xylene	OSHA Z-1	435 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless
Physical State: Liquid
Odor: Hydrocarbon odor
pH: Not Applicable
Vapor Pressure: 2.5 psia (Estimated)
Vapor Density (Air = 1): No data available
Boiling Point: No data available
Solubility: Insoluble in water.
Freezing Point: No data available
Specific Gravity: 0.8088 @ 15°C (59°F) (Estimated)
Density: 0.8122 kg/l @ 15°C (59°F)
Viscosity: <1.07 cSt @ 21.1°C (70°F) (Estimated)
Evaporation Rate: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid: Avoid contact with heat, sparks, fire and oxidizing agents
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

OCT - 4 2012

Mr. Trip Oliver
Manager, Policy, Government and Public Affairs
Chevron North America
1550 Coraopolis Heights Road
Moon Township, PA 15108

Re: Discovery Date of Incident(s): May 2, 2012 NRC Incident Report #1010390, Regional Case # PA120475
Location of Incident(s): Robinson Township, Washington County, PA

Dear Mr. Oliver:

On March 1, 2012, the U.S Environmental Protection Agency ("EPA") issued Chevron North America ("Chevron") an information request letter seeking information concerning the discharge of hazardous substances, pollutants or contaminants into the environment from a facility located at Robinson Township (Robinhill 15/18 Well), Washington County, PA that occurred in December 2011 (hereinafter the "Site" or the "facility", as further defined in *Enclosure 1*). On May 8, 2012, Chevron provided a response to EPA's information request letter that requires additional information. On May 2, 2012, Chevron reported to the National Response Center a continuing discharge associated with the December 2011 discharge that was the focus of EPA's March 1, 2012 information request letter. In light of the May 2, 2012, incident report, NRC Incident Report # 1010390 (Attachment 1), Chevron is required to respond fully and completely to each and every inquiry below.

EPA is requesting this information pursuant to the authority granted to it under Section 308 of the Clean Water Act, ("CWA"), 33 U.S.C. § 1318. Failure to respond fully and truthfully to this information request within the specified time frame could result in an action by EPA. The CWA permits EPA to seek the imposition of penalties of up to $37,500.00 for each day of continued non-compliance. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001.

You are entitled to assert a claim of business confidentiality covering any part or all of the information, in a manner described in 40 C.F.R. § 2.203(b). Information subject to a claim of business confidentiality will be made available to the public only in accordance with 40 C.F.R. Part 2, Subpart B. Unless a claim of business confidentiality is asserted at the time the requested information is submitted, EPA may make this information available to the public without further notice to you.

INFORMATION REQUIRED

1. Identify all substances released from the Facility in connection with the above referenced Regional Response Center Spill Number. Specifically, identify:

   a. The name and Chemical Abstract Services ("CAS") Number for each substance discharged;
   b. For oils, identify the type and grade;
   c. Provide the quantity, concentration of each substance discharged and the method by which the concentration was measured or estimated. For mixtures, provide the name, quantity, and concentration of each constituent of that mixture;
   d. Provide the solubility and specific gravity of each substance discharged.

2. Describe the physical source (including, but not limited to vehicle, outfall, tank, container, pipe, ditch, conduit, or equipment) at the Facility from which the oil and/or hazardous substance or substances (the term "substance" as used here includes both oils and hazardous substances) initially was discharged on or around May 2, 2012. If the substance was discharged from more than one source, please identify each specific source

3. Provide the total quantity of undiluted substance(s) released from the Facility in gallons for oils and in pounds for hazardous substances.

4. List the location of the discharge, including the closest street address, the city, county, state, zip code, and provide the Global Positioning System ("GPS") coordinates.

5. List the starting time, date, and duration of the discharge and the time and date when the discharge entered a waterway.

6. List the time and date of the discovery of the discharge and the person(s) who made the discovery.

7. List the federal and state agencies, if any, to which the owner and/or operator reported the discharge(s), the dates and times on which the reports were made, and the name(s) and title(s) of the person(s) who made the reports.

8. Identify the first body of water that the substance reached. Identify the actual or estimated quantity of the substance(s) that entered that water body. Describe the location of any other water bodies that the substance(s) subsequently entered, including the actual or approximate distance from the Facility. In addition, state the actual or estimated quantity of the substance(s) that entered those additional water bodies.

9. Identify any storm drains or sewers through which the substances flowed, and identify the waters to which those storm drains or sewers subsequently drain. State the actual or estimated quantity of the substance(s) that entered the storm drain or sewer.

10. Identify whether each water identified in response to Questions 8 and 9 was, at the time of the spill, "navigable water" as defined in *Enclosure 1*, a tributary of navigable water; and/or physically connected to a navigable water. Identify all such navigable waters by

name and identify the type of body of water (e.g. river, stream, lake, creek, or other type of body of water).

11. Describe any damage to animal life or vegetation that you observed or otherwise have knowledge of.

12. For all discharges of oil to navigable waters, adjoining shorelines to navigable waters, or to any other water/shoreline, please indicate the following:

    a. Did you observe from the oil a film, sheen, discoloration or iridescent appearance on the surface or shoreline of any water? If yes, please describe your observations;
    b. Did, to your knowledge, any other person observe from the oil a film, sheen, discoloration or iridescent appearance on the surface or shoreline of any water? If yes, please identify all such persons and describe those observations;
    c. Did you observe any oil sludge or oil emulsion beneath the surface or on the adjoining shorelines of any water? If yes, please describe your observations;
    d. Did, to your knowledge, any other person observe any oil sludge or oil emulsion to be deposited beneath the surface or on the adjoining shorelines of any water? If yes, please identify all such persons and describe those observations.

13. Provide a complete description of the cause or causes of the discharge (e.g., pump failure, by-pass of treatment system), as well as any other relevant circumstances. If the discharge was caused by the actions of a third party (for instance, as the result of an accident or vandalism), describe in detail the measures that were in place to prevent such actions. For vandalism, identify any enforcement agencies to which the owner or operator reported the vandalism

14. Describe the original Site conditions prior to the work done at the Site. Provide copies of all documents, or parts thereof, that assess the extent of any wetlands at the Site, or that determine or investigate any parameter used by the U.S. Army Corps of Engineers to determine the existence of wetlands.

15. Provide copies of all permits or other authorizations provided by any governmental entity (federal, state, local) to conduct natural gas extraction operations at the facility.

16. Provide the name(s) and address(es) of the owner(s) of the Facility.

17. Provide the name and address of the operator(s) of the Facility.

18. Provide copies of all documents, or parts thereof that assess or identify or purport to assess or identify the extent of any waters of the United States as that term is defined at 33 U.S.C. Part 328 at "The Site" including aerial photographs and plans.

19. Provide copies of any and all authorizations to discharge dredged and/or fill material pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) issued to Respondent and/or any parent, subsidiary or affiliated entity by the U.S. Army Corps of Engineers or issued by Pennsylvania on behalf of the U.S. Army Corps of Engineers at "The Site".

20. Did you or anyone acting on your behalf have any communications, either verbally or in writing, with any representatives of the U.S. Army Corps of Engineers (Corps), the

Pennsylvania Department of Environmental Protection (PADEP), with regard to work at the Site or compliance with the Clean Water Act at the Site? If so, state the name and telephone number of the person(s) with whom you communicated or with whom communications were made on your behalf. Provide copies of any and all written communications between you and anyone acting on your behalf and any representatives of the Corps, PADEP, including all notes, memoranda, transcriptions, or other documents memorializing any conversations by and between you and anyone acting on your behalf and any representatives of the Corps or PADEP.

21.. Provide copies of all physical data taken at the Site and the location for the taking of all such data (in as precise a form as information for each such location is available), including readings from water monitoring wells located at the Site, and the results of all water, soil or vegetation sampling taken at the Site, analysis of discharge monitoring points, and any and all sampling and/or monitoring information. Provide all documents memorializing any and all water, wastewater, or effluent monitoring and/or soil or vegetation sampling taken at the Site.

22. What steps were taken, if any, to determine the extent of wetlands and waterways on the Site? Provide copies of all documents, or parts thereof, that assess the extent of any wetlands at the Site, or that determine or investigate any parameter used by the U.S. Army Corps of Engineers to determine the existence of wetlands.

23. With regard to the streams, whether perennial or intermittent, creeks, seeps, fissures, drainage ways, impoundments, dams, ponds and any other water bodies whether flowing or static, please state: a) the origin of the water body; b) the date or dates on which it was impacted, including but not limited to, being buried, channeled, relocated, culverted, piped, or impounded; c) the names of the contractors or other entities that performed the work; d) the extent of the disturbance; and e) the exact nature of the disturbance.

24. Have you or anyone working on your behalf performed an extent of wetlands determination for the Site?

Your response should be mailed within **thirty (30) days** of your receipt of this letter to:

Paula Curtin
Oil and Prevention Branch (3HS61)
U.S. Environmental Protection Agency, Region III
1060 Chapline Street, Suite 303
Wheeling, WV 26003

Please certify the information provided in response to this letter in the following manner:

I hereby certify the information to be true and accurate to the best of my knowledge.

Signature:_____
Name (Please print or type):_____
Title:_____
Telephone Number:_____

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific entities as part of an administrative investigation.

If you have any questions on this matter, please call Paula Curtin at (304) 234-0256.

Sincerely,

Karen Melvin, Associate Division Director
Office of Enforcement
Hazardous Site Cleanup Division

cc: Todd Lutte (3EA30)

Enclosure 1

DEFINITIONS

The following definitions shall apply to the following words as they appear in this Request:

Clean Water Act Definitions

1. **Discharge:** For purposes of Section 311 of the Act, a discharge to navigable waters or adjoining shorelines includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, but excludes certain discharges in compliance with a permit under Section 402 of the Act.

2. **Drill Pad:** Drill pad shall mean any drilling pad, platform, or other structure designed for use and/or actually used to drill for purposes of natural gas production, and shall include any and all equipment such as drill rigs, contained thereon.

3. **Onshore Facility:** The term onshore facility shall mean any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land.

4. **Offshore Facility:** The term offshore facility shall mean any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

5. **Navigable Waters:** Navigable waters of the United States means navigable waters" as defined in section 502(7) of the Federal Water Pollution Control Act ("FWPCA"), and includes: (1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters; (2) Interstate waters; (3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and (4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

6. **Well:** The term means any well that is used for or is related to natural gas production.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains benzene.
GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.
OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains n-hexane.
TARGET ORGAN TOXICITY: Prolonged or repeated ingestion, skin contact or breathing of vapors of n-hexane has been shown to cause peripheral neuropathy. Recovery ranges from no recovery to complete recovery depending upon the severity of the nerve damage. Exposure to 1000 ppm n-hexane for 18 hr/day for 61 days has been shown to cause testicular damage in rats. However, when rats were exposed to higher concentrations for shorter daily periods (10,000 ppm for 6 h/day, 5 days/wk for 13 weeks), no testicular lesions were seen.
CARCINOGENICITY: Chronic exposure to commercial hexane (52% n-hexane) at a concentration of 9000ppm was not carcinogenic to rats or to male mice, but did result in an increased incidence of liver tumors in female mice. No carcinogenic effects were observed in female mice exposed to 900 or 3000 ppm hexane or in male mice. The relevance for humans of these hexane-induced mouse liver tumors is questionable.
GENETIC TOXICITY: n-Hexane caused chromosome aberrations in bone marrow of rats, but was negative in the AMES and mouse lymphoma tests.

This product contains xylene.
ACUTE TOXICITY: The primary effects of exposure to xylene in animals and humans are on the central nervous system. In addition,in some individuals, xylene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.
DEVELOPMENTAL TOXICITY: Xylene has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations. In addition, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Since xylene can cross the placenta, it may be appropriate to prevent exposure during pregnancy. GENETIC TOXICITY/CARCINOGENICITY: Xylene was not genotoxic in several mutagenicity testing assays including the Ames test. In a cancer study sponsored by the National

Toxicology Program (NTP),technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years. HEARING: Mixed xylenes have been shown to cause measurable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Exposure to 1450 ppm xylene for 8 hours caused hearing loss while exposure to 1700 ppm for 4 hours did not.Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss in rats at low concentrations. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.
This product contains toluene.
GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.
HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.
COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This product contains ethylbenzene.
GENETIC TOXICITY: Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. CARCINOGENICITY: In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

This product may contain significant amounts of Polynuclear Aromatic Hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals.

Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing, of mists, vapors or dusts should be reduced to a minimum.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIRONMENTAL FATE
Ready Biodegradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, I

IMO/IMDG Shipping Description: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, I, FLASH POINT SEE SECTION 5

ICAO/IATA Shipping Description: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, I

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES	
2.	Delayed (Chronic) Health Effects:	YES	
3.	Fire Hazard:		YES
4.	Sudden Release of Pressure Hazard:	NO	
5.	Reactivity Hazard:		NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK

02=NTP Carcinogen

06=NJ RTK
07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Benzene	01-1, 02, 04, 05, 06, 07
Ethylbenzene	01-2B, 04, 05, 06, 07
Hexane	03, 05, 06, 07
Toluene (methylbenzene)	03, 04, 05, 06, 07
Xylene	05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	10000 lbs
Ethylbenzene	1000 lbs	None	200000 lbs
Hexane	5000 lbs	None	71429 lbs
Toluene (methylbenzene)	1000 lbs	None	20000 lbs
Xylene	100 lbs	None	2000 lbs

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 4 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 4 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT: This is a new Material Safety Data Sheet.
Revision Date: JUNE 06, 2011

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

NATIONAL RESPONSE CENTER 1-800-424-8802
GOVERNMENT USE ONLYGOVERNMENT USE ONLY***
Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 1010390

INCIDENT DESCRIPTION

*Report taken by: MST1 RICHARD LAYMAN at 19:47 on 02-MAY-12
Incident Type: FIXED
Incident Cause: OTHER
Affected Area:
REGIONAL CASE NUMBER PA 12 0475
Incident was discovered on 02-MAY-12 at 19:30 local incident time.
Affected Medium: WATER PUDDLES OF WATER

REPORTING PARTY

Name: KRISTIE TICE
Organization: CHEVRON
Email Address: ktice@chevroncom
CHEVRON reported for the responsible party.
PRIMARY Phone: (713)3721550
Type of Organization: PRIVATE ENTERPRISE

SUSPECTED RESPONSIBLE PARTY

Name: CHEVRON APPALACHIA, LLC
Organization: CHEVRON APPALACHIA, LLC
Address: 1550 CORAOPOLIS HEIGHTS ROAD
MOON TOWNSHIP, PA 15108

INCIDENT LOCATION

724 WASHINGTON ROAD County: WASHINGTON
City: ROBINSON TOWNSHIP State: PA Zip: 15019
VICINITY OF PIPELINE RIGHT-OF-WAY TO EAST OF ROBINHILL 15/18 WELL PAD

RELEASED MATERIAL(S)

CHRIS Code: OTH Official Material Name: OTHER OIL
Also Known As: NATURAL GAS CONDENSATE
Qty Released: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

IN CONNECTION WITH A RELEASE OF CONDENSATE AT THE ROBINHILL 15/18 WELL SITE PREVIOUSLY REPORTED TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION ON DECEMBER 20, 2011, SHEENS FROM SUSPECTED CONSTITUENTS OF CONDENSATE WERE OBSERVED IN SMALL PUDDLES OF WATER IN THE VICINITY OF A PIPELINE RIGHT-OF-WAY ADJACENT TO THE WELL SITE. A PRELIMINARY DETERMINATION NOW INDICATES THAT THESE PUDDLES OF WATER MAY BE WITHIN POTENTIALLY JURISDICTIONAL WETLANDS. THIS IS NOT A NEW RELEASE BUT ADDITIONAL INFORMATION ABOUT THE PREVIOUSLY REPORTED RELEASE. THE SOURCE OF THE RELEASE WAS IDENTIFIED AND ELIMINATED, AND REMEDIATION HAS BEEN ONGOING SINCE DECEMBER 2011.

SENSITIVE INFORMATION

cc: J. Kilpatrick

INCIDENT DETAILS

Package: NO
Building ID:
Type of Fixed Object: NATURAL GAS WELL

Power Generating Facility: NO
Generating Capacity:
Type of Fuel:
NPDES:
NPDES Compliance: UNKNOWN

IMPACT

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:
FATALITIES: NO Empl/Crew: Passenger: Occupant:
EVACUATIONS: NO Who Evacuated: Radius/Area:

Damages: NO

Closure Type	Description of Closure	Hours Closed	Direction of Closure
Air: N			
Road: N			Major Artery: N
Waterway: N			
Track:			

Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

THE SOURCE OF THE RELEASE WAS IDENTIFIED AND ELIMINATED, AND REMEDIATION HAS BEEN ONGOING SINCE DECEMBER 2011.
Release Secured: YES
Release Rate:
Estimated Release Duration:

WEATHER

Weather: UNKNOWN, ||F

ADDITIONAL AGENCIES NOTIFIED

Federal:
State/Local: PDEP NOTIFIED IN DEC. 2011
State/Local On Scene:
State Agency Number:

NOTIFICATIONS BY NRC

ATLANTIC STRIKE TEAM (MAIN OFFICE)
02-MAY-12 20:05 (609)7240008
CGIS RAO ST. LOUIS (COMMAND CENTER)
02-MAY-12 20:05 (314)2692420
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
02-MAY-12 20:05 (202)3661863
U.S. EPA III (MAIN OFFICE)
02-MAY-12 20:16 (215)8149016 ZENONE
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
02-MAY-12 20:05 (202)2829201
NJ STATE POLICE (MARINE SERVICES BUREAU)
02-MAY-12 20:05 (609)9636900
NOAA RPTS FOR PA (MAIN OFFICE)
02-MAY-12 20:05 (206)5264911
PA STATE POLICE (BUREAU OF CRIMINAL INVESTIGATION)
02-MAY-12 20:05 (717)5255260
SECTOR OHIO VALLEY (COMMAND CENTER)

02-MAY-12 20:05 (502)7795424
SECTOR OHIO VALLEY (MSU PITTSBURGH AUTOMATICS)
02-MAY-12 20:05 (412)6445808
PA EMERG MGMT AGCY (MAIN OFFICE)
02-MAY-12 20:05 (717)6512001
USCG DISTRICT 8 (MAIN OFFICE)
02-MAY-12 20:05 (504)5896225
WEB REPORT (WEB REPORT SUBMITTER)
02-MAY-12 20:05
WEST VIRGINIA DEP (MAIN OFFICE)
02-MAY-12 20:05 (304)5585938
WV DEP ATTN: DUTY OFFICER (MAIN OFFICE)
02-MAY-12 20:05 (800)6423074
WV DEP SPILL LINE (MAIN OFFICE)
02-MAY-12 20:05 (304)3683960

ADDITIONAL INFORMATION

*******WEB REPORT********AMOUNT SPILLED MARKED "UNKNOWN" ABOVE IS ESTIMATED TRACE AMOUNTS CONSISTENT WITH OBSERVATIONS.

*** END INCIDENT REPORT #1010390 ***

Report any problems by calling 1-800-424-8802

PLEASE VISIT OUR WEB SITE AT http://www.nrc.uscg.mil

1179730	02-MAY-12 19:47	1010390	Pending	ZENONE	CHEVRON APPALACHIA, LLC	ROBINSON TOWNSHIP, PA County: WASHINGTON	NATURAL GAS CONDENSATE (0 UNKNOWN AMOUNT);	Oil	EPAR3 DUTY OFFICER ZENONE CONTACTED PEMA ON BEHALF OF PADEP DURING NON-DUTY HOURS. PEMA CONFIRMED RECEIPT OF NRC REPORT AND PASSED IT ALONG TO PADEP-SWRO FOR FOLLOW-UP. ALTHOUGH NO EPAR3 RESPONSE ACTIVITIES ANTICIPATED, PASS COPY OF NRC REPORT TO EPAR3 OIL PROGRAM FROM RRC ON THURSDAY 05/03/12 FOR POSSIBLE ENFORCEMENT ACTION, AS DEC 2011 INCIDENT APPARENTLY WAS NOT REPORTED TO NRC BY RP.	n/a	No

TELEPHONE CONVERSATION RECORD

CONVERSATION WITH:
NAME: Vince Yanko

COMPANY: PADEP

FACILITY

Chevron

RECORD OF PHONE CALL ATTEMPTS:

DATE: 3/19/15 TIME:	( ) left message ( ) see notes ( ) no answer
DATE: TIME:	( ) left message ( ) see notes ( ) no answer

(✓) ORIGINATOR PLACED CALL
( ) ORIGINATOR RECEIVED CALL

SUBJECT: Robin Hill.

* NOTES *

- Cleanup/Remediation Continuing
- Cleanup under Act.
- At this time no evidence of Surface water being impacted.
- Penalty will be assessed After Cleanup is Complete.

FOLLOW-UP ACTION:

☐ COPY/ROUTE TO: _____

☒ FOLLOW-UP

☐ FILE

ORIGINATOR: Paula Curtin RPC

TELEPHONE CONVERSATION RECORD

CONVERSATION WITH:
NAME: Vince Yanko (Supervisor)

COMPANY: PADEP

FACILITY
Chevron - Robin Hill

RECORD OF PHONE CALL ATTEMPTS:

DATE: 7/1/12 TIME:	( ) left message ( ) see notes ( ) no answer
DATE: TIME:	( ) left message ( ) see notes ( ) no answer

(.) ORIGINATOR PLACED CALL
( ) ORIGINATOR RECEIVED CALL

SUBJECT: Dec 19, 2011 - Feb 16, 2012 Condensate Spill

* NOTES *

Vince Yanko Stated:
- EPA would have a difficult time Proving a Surface Water body was impacted NO Evidence Of Staining on Stream.
DEP's sampling ~~method~~ did not indicate Product in Stream.
Case is on-going and Currently under Act 2 Remediation Program

FOLLOW-UP ACTION:

☐ COPY/ROUTE TO: _____

☐ FOLLOW-UP

☐ FILE

ORIGINATOR: Paula Curtin

David Eberle (412) 442-4156 is handling that portion of case.
- Cleanup & remediation continuing.
According to PADEP Chevron put pads in Creek as an ~~OIL~~ precaution only.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: 308 Review, Chevron North America, December 19, 2011 and February 16, 2012

FROM: Paula Curtin
Spill Enforcement Coordinator (3HS61)

THRU: Anne Gilley, Acting Chief
Oil and Prevention Branch (3HS61)

THRU: Joan Armstrong, Acting Associate Director
Office of Enforcement (3HS60)

TO: File

On March 1, 2012, pursuant to EPA's information gathering authority, [Section 308 of the Clean Water Act ("CWA"), 42 U.S.C. § 1318], an Information Request letter was issued to Chevron North America ("Chevron"), in response to a news report referral alleging discharges on December 19, 2011 and February 16, 2012. The information request letter was issued to gather information about a condensate spill(s) that occurred in Robinson Township, Washington County, Pennsylvania at the Robinhill 15/18 well site. On May 7, 2012, EPA received a response from Chevron. A second Information Request letter was issued to Chevron on October 4, 2012 to gather additional information. EPA received a response on November 10, 2012.

This review was conducted to determine if violations under Section 311 of the CWA warrant further action. The second Information Request letter was issued to gather information on jurisdictional wetlands in the area and additional details of the February 16, 2012 incident.

On December 19, 2011, Chevron employees discovered a release of natural gas condensate leaking from a condensate line between the wellhead and condensate tanks on the well pad of the Robinhill 15/18 well site. According to the response, Chevron immediately shut in the well, stopped the release of material and began responding to and remediating the release. Chevron reported the release to the Pennsylvania Department of Environmental Protection ("PADEP") on December 20, 2011. Chevron estimates that approximately 80 barrels of condensate leaked from a crack in a weld of a two inch underground line. The second reported spill on February 16, 2012, was seepage from the hillside related to the original spill.

According to the response, and multiple conversations with Vince Yanko, PADEP, Chevron has completed an extensive cleanup and removal of contaminated soil. PADEP required Chevron to do extensive sampling of local streams, private water wells and jurisdictional wetlands in the area. Sample results show no evidence of contamination of the wells. In addition, according to the response and PADEP, no surface water or wetlands were impacted by this incident.

PADEP reported that the surface cleanup and removal of contaminated soil is complete. Site

restoration will be completed during the spring of 2013. PADEP reported it is in the preliminary phase of assessing a penalty and has not yet calculated a figure but anticipates a substantial penalty for numerous violations of State Laws.

The Information Request response and all documents associated with the response have been forwarded to Todd Lutte, EPA Region III's Environmental Assessment and Innovation Division, for any possible 404 violations.

Based on the review of the response, and available information from PADEP, it has been determined that no actionable violation under Section 311 of the CWA can be substantiated.

Based on current information available, there is no further action under Section 311(b)(3) being contemplated at this time. EPA reserves the right to conduct future investigations and bring future enforcement actions, as appropriate.

	CONCURRENCES							
SYMBOL	3HS61	3HS61	3HS60					
SURNAME	Curtin BC	Gilley AG	Armstrong					
DATE	1/28/13	2/4/13	2/14/13					

post-gazette.com
Pittsburgh Post-Gazette

State probing second spill at Marcellus Shale well

February 21, 2012 12:00 am
/ Pittsburgh Post-Gazette

The state Department of Environmental Protection was continuing its investigation of the second spill of condensate fluids in three months at a Chevron-Appalachia Marcellus Shale gas well operation in Robinson, Washington County.

John Poister, a DEP spokesman, said Sunday that the spilled condensate -- a mixture of liquid hydrocarbons or "wet gases" and drilling fluids -- was discovered Thursday by a township employee inspecting a nearby facility that separates the fluids from the natural gas. The spilled liquid had run into Bigger Run Creek, a tributary of Raccoon Creek. He had no information about whether fish or aquatic life were killed, but cleanup crews placed absorbent material in the creek on Friday.

Mr. Poister didn't know how much condensate was spilled and said the DEP is trying to determine the amount and the cause. Department investigators were at the scene Friday and planned on returning this week.

Mr. Poister said Chevron-Appalachia is continuing remediation work that started in December, when the first condensate spill occurred, and has dug up and filled more than 10 Dumpsters with contaminated soil. The DEP has not issued a violation notice for that spill.

First Published 2012-03-12 17:06:00

PIPELINE
Your source for Marcellus Shale coverage & community
Pittsburgh Post-Gazette

Marcellus spill in Robinson, Washington County

ShareThis

SUNDAY, 19 FEBRUARY 2012 13:53 WRITTEN BY DON HOPEY

The state Department of Environmental Protection is continuing its investigation of the second spill of condensate, "wet gases" and contaminated drilling liquids, in three months at a Chevron-Appalachia Marcellus Shale gas well operation in Robinson Township, Washington County.

John Poister, a DEP spokesman, said Sunday the spilled condensate, which was discovered last Thursday by a township employee inspecting a gas pipeline facility nearby, had run into Bigger Run Creek, a tributary of Raccoon Creek. He had no information about whether fish or aquatic life were killed, but cleanup crews placed absorbent material in the creek on Friday.

Mr. Poister could not say how much condensate material was spilled and said the DEP is trying to determine the amount and the cause. Department investigators were at the scene Friday and planned on returning this week.

Mr. Poister said Chevron-Appalachia is continuing remediation work that started in December, when the first condensate spill occurred, and has dug up and filled more than 10 dumpsters with contaminated soil. The DEP has not issued a violation notice for either spill.

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MarketWatch
THE WALL STREET JOURNAL.

Feb. 28, 2012, 2:21 p.m. EST

Chevron reports oil spill in Marcellus Shale: Pa.

By Isabel Ordonez

HOUSTON -(MarketWatch)- Chevron Corp. (NYSE:CVX) has reported to state regulators that a small oil condensate spill occurred late last year at a company's Marcellus Shale well site was greater than anticipated, Pennsylvania Department of Environmental Protection said Tuesday.

On Dec. 20, Chevron reported to regulators that it has discovered a leak from a pipe joint weld buried four feet under the well pad in Robinson, Washington County. Initially, the broken pipe was estimated to have spilled two barrels of oil condensate, but Chevron reported to regulators by the end of December that the spill was greater than anticipated, said John Poister, community relations coordinator for the DEP. "As of today they believe as much of 80 barrels of condensate were lost between Nov. 8, when they begun their fracking operation, and Dec. 18, when they discovered the break in the pipe," Poister said.

Chevron didn't immediately respond to a request for comment.

The news was first reported by the Pittsburgh Post-Gazette Tuesday.

The company is working on determine the extent of the contamination of the soil at the site, Poister said, adding that the DEP has collected soil and water samples that are being tested for contamination.

"There has been some neighbors who are concerned but they have not noticed changes in their water," Poister. "There is no believe the spill has spread beyond Chevron's properties."

Chevron became one of the largest natural gas producer in the Marcellus Shale after it bought Atlas Energy last year for about $4 billion.

The spill comes at a time when hydraulic fracturing, or fracking, which involves using huge quantities of pressurized water and chemicals to unlock oil and gas resources trapped in rocks underground, is under scrutiny by environmental groups. The technique is opposed by some environmental groups that say the practice can contaminate groundwater.

PIPELINE
Your source for Marcellus Shale coverage & community
Pittsburgh Post-Gazette

Marcellus spill in Robinson, Washington County

SUNDAY, 19 FEBRUARY 2012 10:53 WRITTEN BY DON HOPEY

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The Natural Gas Forums

Open Discussion => Natural Gas Leasing => Pennsylvania => Topic started by: ruby_99 on February 18, 2012, 01:58:02 AM

Title: **More fine work by Atlas**
Post by: **ruby_99** on **February 18, 2012, 01:58:02 AM**

Pardon the sarcasm. Here's (http://www.observer-reporter.com/or/break11/02172012gaswellspill) a report of another accident at an Atlas/Chevron site. Must be one of the Robinhill wells.

"John Poister, spokesman for the Southwest regional office of the DEP, said an unknown amount of condensate was released into the soil and ran down a hill into the creek."

Title: **Re: More fine work by Atlas**
Post by: **Isheoktoday** on **February 18, 2012, 02:14:55 AM**

That is unfortunate. Maybe that is why Chevron says they want to buy another company with good employees, not just acreage.....

My sarcasm aside, that gives the industry a bad name.

Title: **Re: More fine work by Atlas**
Post by: **vlaamseman** on **February 18, 2012, 02:22:14 AM**

There ought to be a way that we could just let Range Resources do all the Marcellus wet gas wells in Washington County. They probably do over 90 percent of them now, yet we have seldom heard of any problems from their wells, dating back to 2004 in Washington County.

Title: **Re: More fine work by Atlas**
Post by: **Berkeley** on **February 18, 2012, 02:26:03 AM**

Is this chevron's rep or just atlas?

Title: **Re: More fine work by Atlas**
Post by: **meangene** on **February 18, 2012, 02:57:51 PM**

An update on the Atlas/Chevron spill in Robinson Twp:

http://www.observer-reporter.com/or/story11/02-18-12-chevron-spill

DEP probes gas well spill
By Christie Campbell Staff writer chriscam@observer-reporter.com

McDONALD - A spill of what appears to be condensate at a gas well site owned by Chevron-Appalachia in Robinson Township was being investigated Friday by the state

Department of Environmental Protection.

Robinson Township Supervisor Brian Coppola said the spill at the site at 8400 Noblestown Road was discovered Thursday by a township employee and DEP was notified.

The material had run into Bigger Run Creek, which Coppola said feeds into Raccoon Creek. He expressed concern about the number of residents who have private water wells in that area.

John Poister, spokesman for the Southwest regional office of the DEP, said an unknown amount of condensate was released into the soil and ran down a hill into the creek. Condensate is a liquid byproduct of gas drilling, which Poister said is wet natural gas.

He said a cleanup crew was on site Friday and placing absorbent material in the creek. Officials are still trying to determine the cause.

Poister said this is the second spill at the site. The first occurred in December. DEP was notified by Chevron of that leak and the company had been working on remediation. A violation notice was not issued to Chevron.

Trip Oliver, manager of policy, government and public affairs, said Chevron stopped the December leak, notified the DEP and "has continued to work with the DEP during the course of its remediation efforts."

Chevron officials did not return calls seeking comment about the second spill Friday afternoon.

DEP investigators were at the site of the second spill Friday and plan to return next week. Lab testing is being done to determine how large the spill is and exactly what it is, Poister said.

Coppola said a township employee noticed the leak while inspecting the nearby Laurel Mountain Midstream dew point control facility. The township reported the leak to the DEP, which had not been aware of it.

"This is the problem with the state watching this industry: they are not following it," Coppola said.

Coppola and other officials at Robinson Township have been outspoken in their criticism of the new state impact fee bill which stripped municipalities of some local zoning and oversight of the gas industry.

Title: **Re: More fine work by Atlas**
Post by: **ruby_99** on **February 18, 2012, 08:21:43 PM**

"while inspecting the nearby Laurel Mountain Midstream dew point control facility"

This facility is just one of the processing plants that Atlas and its offshoots built without the proper permits. I believe both were finished and unused for a few months until permits were obtained.

I believe that all the Robinhill wells pre-dated the Chevron merger.

Title: **Re: More fine work by Atlas**
Post by: **ruby_99** on **February 22, 2012, 03:30:13 PM**

It seems I was a bit hasty.

http://www.observer-reporter.com/or/story11/02-22-12-Robinson-spill-update

"A spokesman for the state Department of Environmental Protection said Tuesday a spill at a gas well site in Robinson Township is likely "a continuation" of a leak first reported in December.

John Poister, spokesman for DEP's Southwest regional office, said the agency first learned of a leak from an underground line to a condensate tank at the Chevron-Appalachia well site Dec. 20. Poister said at this point in the investigation, it appears there was no second spill but only workers cleaning up from that December leak."

Berkeley: As far as I know, we're only referring to Atlas' reputation. I don't know how much things have changed since they were bought out.

Title: **Re: More fine work by Atlas**
Post by: **Berkeley** on **February 23, 2012, 02:26:36 PM**

Thanks. I really hope they bring in a competent, conscientious driller into our area. I guess everyone does. We had a bad accident a year or so ago from what i think was an inexperienced driller.

Title: **Re: More fine work by Atlas**
Post by: **meangene** on **February 25, 2012, 09:52:33 PM**

http://www.observer-reporter.com/or/break11/02-25-12-depspilllarger

DEP: Chevron spill in Robinson larger than first thought

A spokesman for the state Department of Environmental Protection agency said contamination of soil at a gas well site in Robinson Township is much larger than first believed.

John Poister, spokesman for the southwest regional DEP office, said the scope of the spill was revealed during a meeting Friday between the agency and Chevron-Appalachia.

Trip Oliver, manager of policy, government and public affairs for Chevron, said the meeting was held at the agency's request to update them on the cleanup. Oliver said Chevron will continue to keep the DEP informed of the remediation.

To date, nearly 114 dumpsters of contaminated soil have been removed from the site.

Poister did confirm that there was only one spill and that had occurred in December. The company stopped the leak in December.

Title: **Re: More fine work by Atlas**

Post by: **meangene** on **February 28, 2012, 11:09:45 PM**

Another article on the leak: http://www.post-gazette.com/pg/12059/1213129-503.stm

Chevron assessing damage of Washington Co. well leak
Tuesday, February 28, 2012
By Don Hopey, Pittsburgh Post-Gazette

A leaking 2-inch pipe carrying oily condensates from a fracking operation at a Chevron-Appalachia Marcellus Shale well in Robinson, Washington County, has become a much bigger problem than the company and state regulators thought when it was discovered 10 weeks ago.

The leak from a faulty pipe joint weld buried 4 feet under the well pad was discovered by the company and reported to the state Department of Environmental Protection on Dec. 20. At the time, Chevron thought it had spilled about two barrels, or about 100 gallons, and told the DEP it was a minor incident and under control.

But the DEP said Chevron now estimates that as much as 80 barrels, or 4,000 gallons, of condensate -- also known as "wet gas" -- leaked from the pipe between Nov. 8, when the well fracking began, and its discovery 42 days later.

"We're still in the process of assessing the damage caused by this leak," Trip Oliver, a Chevron spokesman, said Monday. "When you have a leak in an underground condensate line, the assessment is not as simple as if the leak was above ground. We've been remediating the site since it was first discovered in December."

John Poister, a DEP spokesman, said the leaking pipe's location, buried instead of above ground where a leak could have been more quickly discovered and fixed, will be part of the department's ongoing investigation, which he described as "still in the early stages." No notices of violation have been issued.

Mr. Poister said at least 1,000 cubic yards of contaminated soil has been dug up on the well pad, and the company has indicated that condensate contamination has spread off the well pad onto adjacent areas of the site property.

"So far, 113 [Dumpsters] have been filled with soil removed from the well site," Mr. Poister said in an email response to questions. "Condensate has been detected off the well pad within the surface waters below the site."

Mr. Poister said containment booms, hay bales and absorbent pads have been deployed around the site to corral and soak up the contaminated water and the DEP has taken soil and water samples. He said the department doesn't know yet if any condensate found its way into Bigger Run Creek, a tributary of Raccoon Creek.

In response to concerns from three nearby residents, Mr. Poister said the department has recommended that Chevron contact them and test well water supplies. He said there is no indication that private well supplies have been contaminated.

Mr. Oliver said the company is developing a final remediation plan, due to the DEP by the end of this week, and "sampling will be a part of that." The company has drilled at least 15 borings to depths between 6 and 12 feet and hired a consultant to help determine the extent of the soil and water contamination.

Reports to and by the DEP a week ago that a second leak had occurred at the well

site were erroneous.
Don Hopey: dhopey@post-gazette.com or 412-263-1983.

First published on February 28, 2012 at 12:00 am

Read more: http://www.post-gazette.com/pg/12059/1213129-503.stm#ixzz1nikrqYsM

Title: **Re: More fine work by Atlas**
Post by: **meangene** on **May 12, 2012, 08:54:15 PM**

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http://www.observer-reporter.com/or/story11/05-12-2012-Chevron-remediation
5/12/2012 3:32 AM
Email this article ? Print this article
Chevron files with DEP intent to address Robinson spill site
By Christie Campbell Staff writer chriscam@observer-reporter.com

As part of its efforts to clean up a spill at a natural gas well site in Robinson Township, Chevron on Friday formally submitted to the Pennsylvania Department of Environmental Protection a notice of intent to remediate the site.

The leak occurred in December at Chevron's Robinhill 15H-18H natural gas well site.

According to Trip Oliver, Chevron's manager for policy, government and public affairs, on Dec. 19, Chevron detected a leak from a crack in a 2-inch underground condensate line at the facility. The company took immediate action to stop the leak and notified the DEP.

At the time, a DEP spokesman said an unknown amount of the condensate was believed to have run down a hillside and possibly entered Bigger Run Creek. Absorbent material was placed in the creek to capture any stray condensate.

Oliver said Friday there is no evidence of condensate in the stream.

Since the leak was first detected, Chevron has been working closely with the DEP on interim remedial activities, including the recovery of condensate and the removal of contaminated soil. It is estimated that the leak amounted to about 80 barrels of condensate. About 6,500 cubic yards of soil have been removed from the site since remediation efforts began last December.

The filing of a notice of intent to remediate is the next step in the process, formally placing remediation of the site under the Act 2 program in alignment with the guidance provided by DEP Oil and Gas Division in its recently published draft spill solicy. As required by the filing, Chevron has provided a copy of the notice to Robinson Township.

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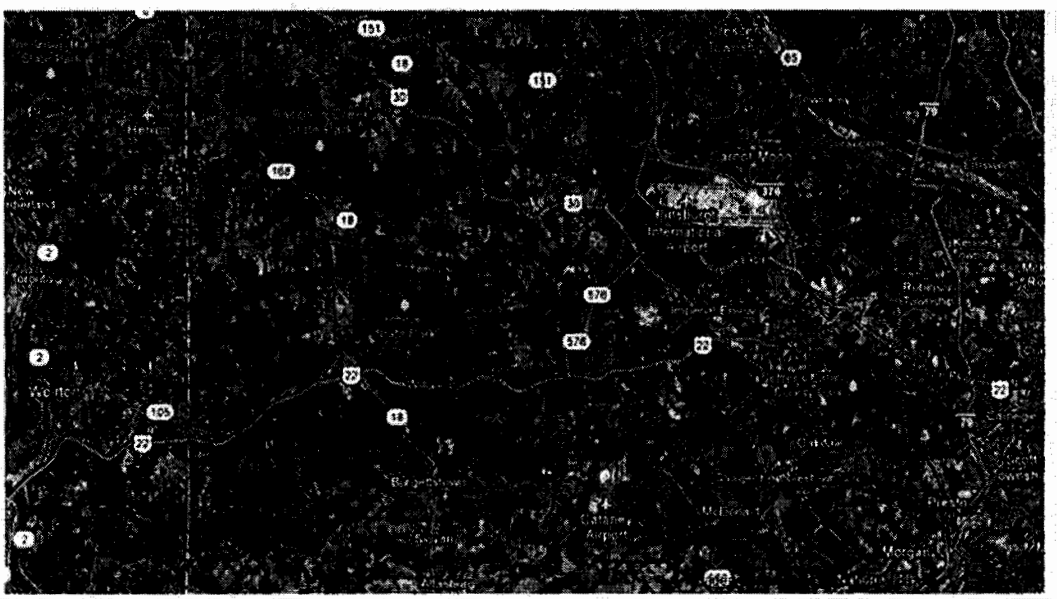
Home » Latitude and Longitude of a Point

To find the latitude and longitude of a point Click on the map, Drag the marker, or enter the...
Address: 8400 noblestown rd Mcdonald pa Go
Map Center: Get Address - Land Plat Size - Street View - Google Earth 3D - Area Photographs

Try out the Google Earth Plug-in. Google Earth gives you a 3D look of the area around the center of the map, which is usually your last click point, and includes latitude, longitude and elevation information.

Latitude and Longitude of a Point



Note: Right click on a **blue marker** to remove it.

Clear/Reset All Markers | Center Red Marker

Get the Latitude and Longitude of a Point

When you click on the map, move the marker or enter an address the latitude and longitude coordinates of the point are inserted in the boxes below.

Latitude: 40.380786
Longitude: -80.215131

	Degrees	Minutes	Seconds
Latitude:	40	22	50.865
Longitude:	-80	12	54.471

Show Point from Latitude and Longitude

Use this if you know the latitude and longitude coordinates of a point and want to see where on the map the point is.
Use: + for *N* Lat or *E* Long - for *S* Lat or *W* Long.
Example: +40.689060 -74.044636
Note: Your entry should not have any embedded spaces.

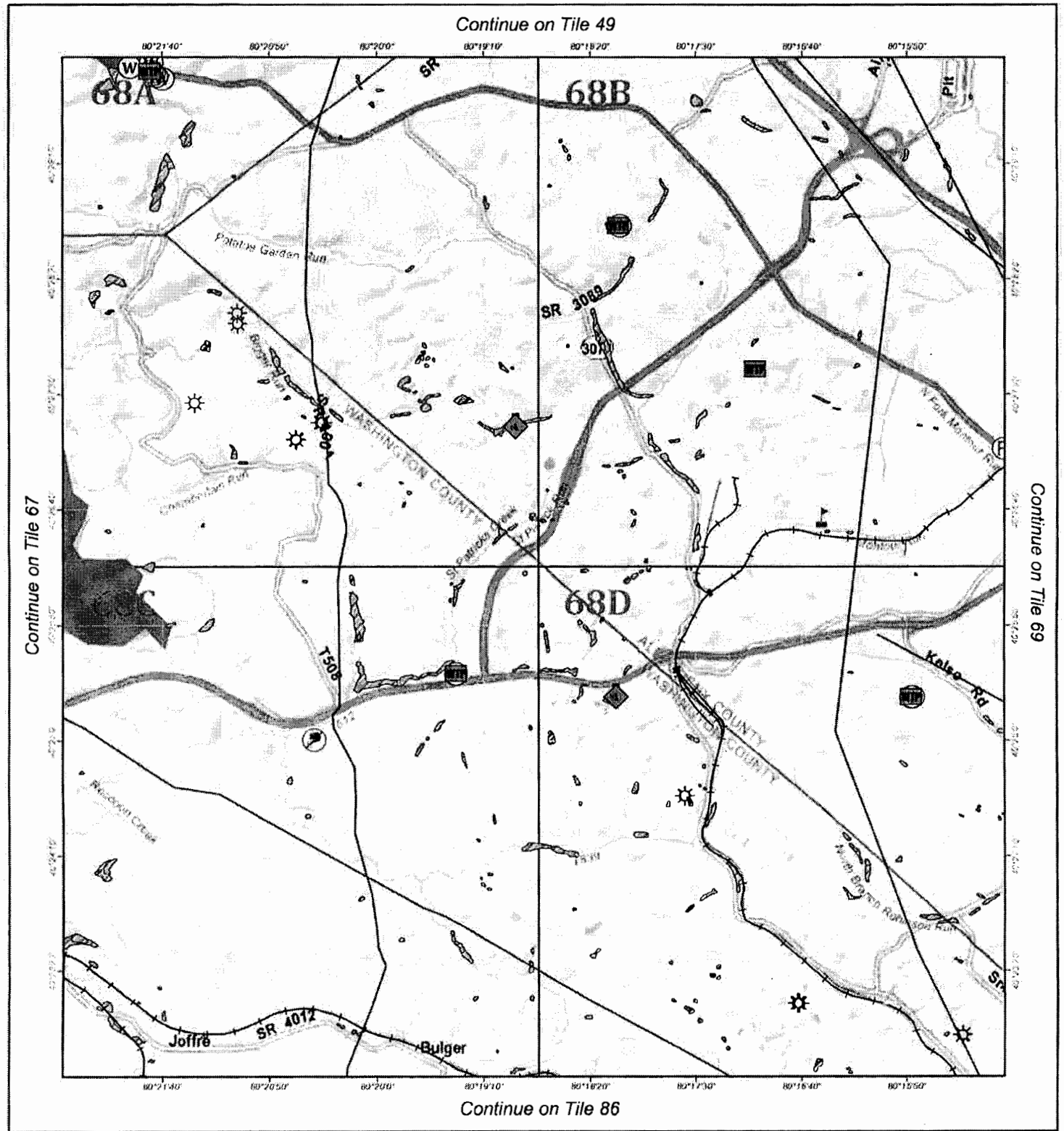
Decimal Deg. Latitude: 40.45492
Decimal Deg. Longitude: -80.34061
Show Point

Example: **+34 40 50.12** for *34N 40' 50.12"*

	Degrees	Minutes	Seconds
Latitude:			
Longitude:			

Show Point

RED MARKER IS 8400 NOBLESTOWN
BLUE MARKER IS LONG. + LAT GIVEN BY CHEVRON



Southwest Pennsylvania/Wheeling Geographic Response Plan

TechLaw

Links

RIVER GRID
LEGEND
USER GUIDE
LAYER STATUS

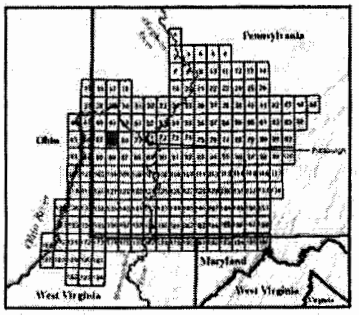
N
W E
S

DOQ Map Tile
68

= Map Tile Displayed

0 0.5 1 2 Miles

1 inch = 1.1 miles



Chevron

Appalachian/Michigan
Business Unit
Chevron North America
Exploration and Production
a Division of Chevron U.S.A Inc.
1550 Coraopolis Heights Road
Moon Township, PA 15108
Tel 412-262-2830
Fax 412-262-2820

Vincent Yantko, Water Quality Specialist Supervisor.
California District Office
Oil & Gas Management
Department of Environmental Protection
25 Technology Drive
California, Pa 15423

March 1, 2012

RE: Robinhill Gas Well Pad Location 15/18 Remediation Activities

Dear Mr. Yantko:

Per your request, the following bullet-pointed memo is to outline the current status of environmental investigations at the Robinhill 15/18 well site location in Robinson Township, Washington County (Site). As noted below, Chevron Appalachia, LLC (Chevron) is investigating the Site using standards and procedures established under Pennsylvania's Land Recycling and Environmental Remediation Standards Act (Act 2). We have preliminarily screened our sampling results using Act 2 residential statewide health standards, but we have not yet made a final determination as to which Act 2 criteria are most appropriate for the Site. As we collect further information and refine our understanding of conditions at the Site, we expect to be in a better position to define our final remedial objectives. In the meantime, Chevron will continue to work closely with you and other representatives of the Pennsylvania Department of Environmental Protection (DEP) to discuss the results of our investigation and our proposed response to the release.

Background

On December 19, 2011, Chevron discovered a condensate leak at the Site. The leak came from a small crack in a 2-inch underground condensate line on that Site. Chevron promptly reported the release and took immediate action to shut in the line and stop the leak. Remediation and assessment activities have been underway since that time.

Initial Site Remediation

- Chevron contracted with Weavertown Environmental Group (WEG) to coordinate the initial on-site soils screening and excavation efforts of impacted materials from the well pad, and to oversee the transportation and off-site disposal of materials.

- Small excavations were performed, by MEC Contractors (MEC) of Bridgeport, WV, in the center of the well pad to gauge the extent of the release.
- MEC removed soil around the existing well appurtenances, including well heads, separation vessels, incinerator units, ventilation stacks and condensate tanks.
- Approximately 800 gallons of condensate laden fluid was removed from excavations via vacuum truck. This fluid was placed into the condensate tanks present on site.
- Following the initial soil excavation and sampling efforts, on January 30, 2012, condensate-impacted soil was discovered beyond the perimeter of the initial excavation.
- Moody and Associates ("Moody"), Houston, PA, contracted by Chevron, further investigated the extent of contamination. Comprehensive additional site characterization was initiated, and soil removal activities were temporarily ceased, pending results of the site characterization.
- The Site was stabilized, by MEC, after soil removal activities were conducted in order to minimize potential erosion and runoff.

Initial Confirmatory Soil Sampling

- Moody conducted partial confirmatory soil sampling (biased) on February 13, 2012 for the western portion of the excavated area on the well pad, near the former source of the condensate leak (Figure 1).
- All of the confirmatory soil sample analytes collected were below Act 2 residential soil standards, with the exception of samples collected at one location (CS-3), where soil samples contained concentrations of Benzene and 1, 3, 5-Trimethylbenzene in excess of Act 2 residential standards (Table 1).
- The current analyte list reflects the constituents of concern (COC) that were analyzed as part of the initial soil and water sampling. Chevron intends to finalize the COC list based upon the results of further investigations and discussions with DEP.

Site Monitoring and Sampling

- Water samples were collected by Moody, from surface water points on the Site, the natural gas pipeline right-of-way and surface features nearby, including several points along Bigger Run and surface ponds to the east and west of the site respectively (See Figure 2). In addition, regular inspections have been conducted of all surface waters in the area of the Site, including Bigger Creek, which may act as potential receptors for the condensate.
- Based on the absence of visual and olfactory evidence of condensate in these surface waters, and the use of a Photo-ionization Detector (PID) that showed no readings of Volatile Organic Compound (VOC) vapors (presence of condensate) in the shallow soil horizons near these surface waters, no condensate fluid has infiltrated surface waters near the Site.
- Analytical results from the sampling program points were received on February 21, 2012 that confirms this conclusion, (Table 2).
- Surface water samples collected during the week of February 12- February 18, 2012 showed no detection of volatile or semi volatile compounds; with the exception of SW-11

which had a benzene concentration of 11.4 µg/L (Act 2 residential used aquifer standard is 5 µg/L). Barium was detected in several of the water samples but well below the statewide health standard.

- Additional water samples were collected from all identified possible surface receptors on Friday February 24, 2012 by Moody, results pending. These possible receptors will be sampled routinely during the ongoing investigation and remediation to identify migration of COCs.
- No residences or residential groundwater wells have been identified in the vicinity of the site which could potentially intercept condensate fluid. The nearest known well is approximately 1750 horizontal feet from the well pad and is topographically upgradient. No impact of this water supply is expected to occur, due to the existence of a surface water divide between the Site and the residential well and due to the presence of clay layer at the Site (See Site Characterization discussion below).

Mitigation Controls

- Absorbents have been placed at strategic places along surface water pathways at the Site to control the potential migration of the condensate along surface water channels. All sorbents are changed on a regular basis, needed or not.
- Measures were implemented to collect condensate from surface water runoff from the Site and assess possible off-site migration of the condensate. Straw bales were placed at surface water egress points to control erosion. Absorbent boom was placed conjoint to the straw to collect any free product. Absorbent pads were placed on standing water to collect standing free product.

Site Characterization

<u>GeoProbe Work</u>

- On February 13, 2012, Moody utilized a direct-push GeoProbe machine for the collection of soil samples from borings conducted in and around the perimeter of the well pad. The depths of these samples were field determined to prevent penetration of the condensate past the clay aquitard and into deeper, groundwater-bearing strata.
- All soils collected from the borings were screened with a PID meter. Certain samples were analyzed for the presence of volatile organic compounds (using Method PA-624/EPA-8260B) and semivolatile organic compounds (using Method PA-625/ EPA-8270) (See Figure 3 and Table 3).
- As of February 28, 2012, a total of 67 borings have been placed around the immediate perimeter of the Robinhill 15/18 well pad (see Figure 3).
- The shallow subsurface materials are mostly (in descending order):
    - One to two feet of fill material or soils
    - A prevalent clay layer, several feet in thickness
    - Siltstone/shale
- As of February 24, 2012, Moody had received laboratory analyticals for soil samples from GP-3 through GP-27, located on the east side of the well pad. These results show

the presence of VOCs in 5 of the 8 samples. However, only one of the samples (GP-7) had a chemical concentration above residential Act 2 standards, in the form of Benzene (Table #3). Note that we are updating the Tables as we continue to receive laboratory results. Table #3 reflects the received written laboratory results whereas Figure 3 refers field screened or verbally conveyed results.

- Moody is still awaiting the results of the surface water samples collected February 24, 2012.
- Additional soil probe and monitoring well installations are planned for the upcoming weeks.

Monitoring Well Installation

- Potable groundwater is found at a much greater depth than the shallow surface waters and perched groundwater at the Site.
- A suite of groundwater monitoring wells is being planned to assess the potential vertical component of subsurface impacts within the groundwater regime. Tentative locations of the proposed monitoring wells will be determined based on the results of the GeoProbe soils sampling. Once the wells are installed, developed, and purged, the monitoring points will be sampled on a steepled frequency basis (i.e. weekly to monthly to quarterly, etc.) which will be determined at a later date.
- It is currently believed that the condensate has not infiltrated the underlying aquifers, due to the presence of the thick, relatively impermeable clay layer that has likely restricted the downward flow of the condensate.

Current Assessment

- Based on current results of Moody's field characterization efforts and consistent with topography of the area, it is believed that the impacted materials are relegated to the eastern half of the Site.
- Analytical results show no surface water outside the limits of disturbance has been affected by the release. Additional surface water sampling is scheduled.

Future Work

- Additional excavation will occur on the well pad. The immediate area of sample CS-3 will have additional material removed. Other selected areas of the well pad may have further excavation to remove impacted soil. This soil will be placed into lined rolloff containers. Following excavation, the area will be re-sampled. If soil results for these areas meet Act 2 standards, the area will be refilled with clean materials and compacted.
- As noted above, the proposed scope of work outlined herein and shown in the attached figures, is subject to change based on developing site characterization results and scenarios. More soils and groundwater characterization efforts may be needed to fully assess the environmental status of the Site and nearby area. Once the site characterization activities are complete and a conceptual model is constructed, remedial options for the Site will be determined based on the data from soil and groundwater and surface water monitoring and further discussions with DEP.

Please do not hesitate to contact me should you require additional information. I may be reached at (412) 865-1566 or via e-mail at *blok@chevron.com*. You may also contact Matthew Barch, Environmental Geologist, at (412) 865-1522 or via e-mail at *mbarch@chevron.com*.

Sincerely,
Chevron Appalachia, LLC

1 March 2012

Blake Loke
Area Operations Manager, Marcellus
Appalachian Michigan Business Unit

CC: J. Guenard Chevron
M. Barch Chevron
K. Coleman Chevron
A Eichler PADEP

Legend
- Confirmatory Samples
- Excavated Area

Scale:
1 in = 100 ft
0 50 100 200
Feet

Prepared for:
Chevron AMSBU

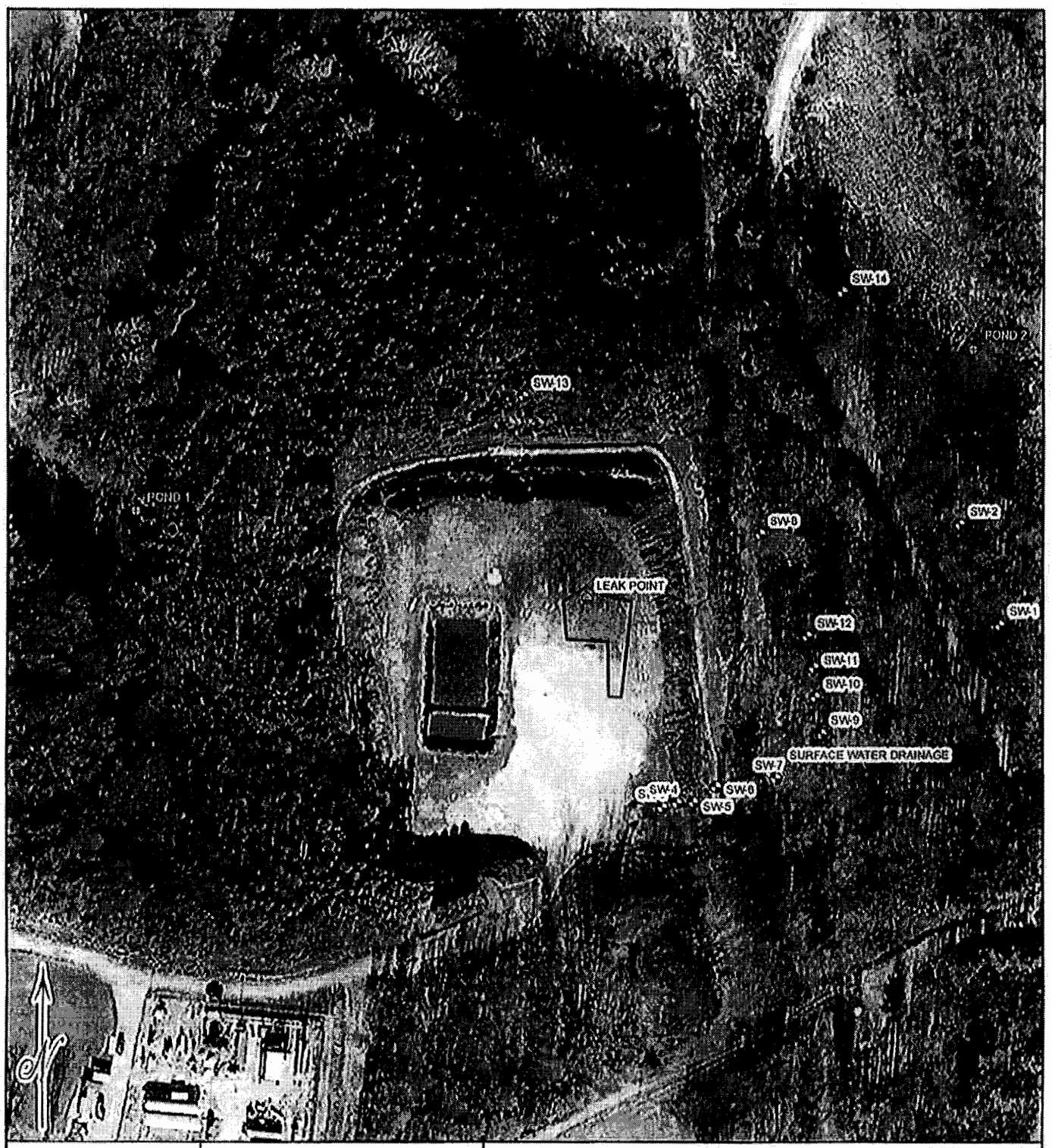
Map Reference:
This exhibit is based on the ESRI Aerial Imagery.
USGS topographic 7.6' quadrangle Clinton, PA.

Figure 1
Chevron Robinhill 15/18 Well Site
Confirmatory Sampling with Background Sample
Robinson Township, Washington County, Pennsylvania

Project #: 12-049 JT

Drawn by:	Checked by:	Date:	Revision:
ADJ	JT	3/1/12	1

199 Johnson Road
Building 2 Suite 101
Houston, PA 15342
724.746.5200 voice
724.746.5603 fax
www.moody-s.com
Moody and Associates, Inc.



Legend

- Excavated Area
- Leak
- Supply
- Surface Water
- Surface Water Drainage

Scale:
1 in = 150 ft

0 75 150 300

Feet

Prepared for:
Chevron AMSBU

Map Reference:
This exhibit is based on the ESRI Aerial Imagery.
USGS topographic 7.5' quadrangle Clinton, PA.

Figure 2
Chevron Robinhill 15/18 Well Site
Surface Water Monitoring/Sampling Points
Robinson Township, Washington County, Pennsylvania

Project #: 12-049 JT

Drawn by:	Checked by:	Date:	Revision:
ADJ	JT	2/9/12	1

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724.746.5200 voice
724.746.5603 fax
www.moody-s.com

Moody and Associates, Inc.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: 308 Review, Chevron North America, December 19, 2011 and February 16, 2002

FROM: Paula Curtin 1/30/13
Spill Enforcement Coordinator (3HS61)

THRU: Anne Gilley, Acting Chief 2/4/13
Oil and Prevention Branch (3HS61)

THRU: Joan Armstrong, Acting Associate Director
Office of Enforcement (3HS60) 2/4/13

TO: File

On March 1, 2012, pursuant to EPA's information gathering authority, [Section 308 of the Clean Water Act ("CWA"), 42 U.S.C. § 1318], an Information Request letter was issued to Chevron North America ("Chevron"), in response to a news report referral alleging discharges on December 19, 2011 and February 16, 2012. The information request letter was issued to gather information about a condensate spill(s) that occurred in Robinson Township, Washington County, Pennsylvania at the Robinhill 15/18 well site. On May 7, 2012, EPA received a response from Chevron. A second Information Request letter was issued to Chevron on October 4, 2012 to gather additional information. EPA received a response on November 10, 2012.

This review was conducted to determine if violations under Section 311 of the CWA warrant further action. The second Information Request letter was issued to gather information on jurisdictional wetlands in the area and additional details of the February 16, 2012 incident.

Chevron reported the release to the Pennsylvania Department of Environmental Protection ("PADEP") on December 20, 2011.

According to the response, and multiple conversations with Vince Yanko, PADEP, Chevron has completed an extensive cleanup and removal of contaminated soil. PADEP required Chevron to do extensive sampling of local streams, private water wells and jurisdictional wetlands in the area. Sample results show no evidence of contamination of the wells. In addition, according to the response and PADEP, no surface water or wetlands were impacted by this incident.

PADEP reported that the surface cleanup and removal of contaminated soil is complete. Site

restoration will be completed during the spring of 2013. PADEP reported it is in the preliminary phase of assessing a penalty and has not yet calculated a figure but anticipates a substantial penalty for numerous violations of State Laws.

The Information Request response and all documents associated with the response have been forwarded to Todd Lutte, EPA Region III's Environmental Assessment and Innovation Division, for any possible 404 violations.

Based on the review of the response, and available information from PADEP, it has been determined that no actionable violation under Section 311 of the CWA can be substantiated.

Based on current information available, there is no further action under Section 311(b)(3) being contemplated at this time. EPA reserves the right to conduct future investigations and bring future enforcement actions, as appropriate.

CHEVRON
APPALACHIAN/MICHIGAN
STRATEGIC BUSINESS UNIT

Preparedness, Prevention & Contingency (PPC) Plan

Prepared in Conformance with 25 PA Chapters 78 and 91
and
PA Oil and Gas Operator's Manual, Chapter 4, Section 1A:
Guidelines for a PPC Plan for Oil and Gas Development

for Pennsylvania Gas Drilling Operations

Revised: NOVEMBER 2011

SEPTEMBER 2011

WELL SITE SPECIFIC ADDENDUM

- Section A -

to

Preparedness, Prevention & Contingency (PPC) Plan

SITE NAME _____

COUNTY _____

TOWNSHIP _____

ACCESS ROAD GPS COORDINATES	
EMERGENCY CONTACT NUMBERS Additional Emergency Contacts listed on Table 9	
EXTERNAL	INTERNAL
	Primary: **Bob Hirtz** – General Manager Cell – **724-323-5632** Office – **724-564-3726** Secondary: **Scott Kohne** – Land Manager Cell – **724-977-1380** Office – **724-564-3737** Tertiary **Tim Berdar** – Construction Supervisor Cell – **724-323-5651** Office – **724-564-3725**
DIRECTIONS:	

WELL SITE SPECIFIC ADDENDUM

- Section B -

to

Preparedness, Prevention & Contingency (PPC) Plan

SITE NAME _____

SUPPLEMENTAL WASTE AND CHEMICAL INVENTORY ITEMS: *(list below any chemicals or waste not listed in Attachments 1 or 2)*				
Chemical Name/Waste Type	Date	Storage Location	Average Quantity	Container Type

TABLE OF CONTENTS

Attachments

1.0 Introduction and Purpose

The purpose of this Preparedness, Prevention & Contingency (PPC) Plan is to ensure adequate preparedness for rapid and appropriate incident response in order to protect Chevron employees, the environment, and Chevron assets. For the purposes of this PPC Plan, an incident is defined as an event that interrupts normal Chevron activities and may result in a threat to human health and/or the environment if not properly addressed.

This PPC Plan is designed to be applicable to any type of incident that may affect Chevron well locations. The PPC Plan is based on the concept that elements of incident response are similar, regardless of the hazard. However, the Plan contains certain hazard-specific information in cases where the hazard requires a response that is unique and not covered by other elements of the PPC Plan. All Chevron employees are to abide by the provisions of this Plan and are required to participate in its administration.

This PPC Plan was developed to comply with the requirements of applicable State laws pertaining to Chevron operations at well locations, specifically PA Title 25 Chapters 78 and 91. Required contents for a Waste Control and Disposal Plan are included in this PPC Plan.

1.1. This PPC Plan may be subject to revision and/or update whenever any of the following occur and will be reviewed annually.

- Applicable DEP regulations are revised
- The plan fails in an emergency
- The installation changes in its design, construction, operation, or other circumstances, in a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency;
- The list of emergency coordinators changes;
- The list of emergency equipment changes; or
- As otherwise required by the department.

1.2. This plan will be located at each well location until the site is reclaimed and in production. A Site Specific Addendum will be attached to each PPC Plan which will identify the name of the well and local emergency contact numbers.

1.3. Copies of the PPC Plan including the Site Specific Addendum for each well location are maintained by the HES Manager at the District office. An electronic copy of the generic portion of the PPC Plan is available to all Chevron employees.

2.0 Background and Responsibility

2.1. Background

2.1.1. Chevron is an oil and gas well company with site locations throughout Western Pennsylvania with a field office located at:

Fayette District (Fayette County):
800 Mountain View Drive
Smithfield, PA 15478
724-564-3700

And a business unit office at:

Moon Township - Appalachia/Michigan Business Unit (AMBU)
1550 Coraopolis Heights Rd.
Moon Township, PA 15108
412-262-2830

2.2. Description of Well Pad Activities

Gas wells drilled and owned by Chevron are non-transportation related for the purposes of onshore gas production. The main activities performed on a well pad are deep gas well drilling using air rotary and rotary steerable methods, well completion via hydraulic fracturing ("fracing"), and natural gas production and transmission.

2.3. Roles and Responsibilities - In the event of an incident at a Chevron site, each employee has specific roles and responsibilities. It is the responsibility of individual employees to know their roles prior to an incident occurring.

2.3.1. Chevron employees are responsible for the following:

- Reporting emergency situations to the Emergency Response Coordinator as soon as possible and following their instructions.
- Attending required training on the contents of this PPC Plan.
- Ensuring that s/he understands emergency evacuation procedures.

2.3.2. Supervisors/Managers/Superintendents are responsible for the following:

- Ensuring their employees follow the procedures outlined in this Plan.
- Notifying the Emergency Response Coordinator of any incidents as soon as possible.
- Ensuring fast, safe and organized evacuation.
- Ensuring orderly and efficient business recovery once the threat has been mediated.

2.3.3. Emergency Response Coordinator (ERC)

The ERC is the primary person responsible for ensuring that an emergency situation is mitigated in a timely and safe manner.

The ERC must be thoroughly familiar with all aspects of this PPC Plan, all operations and activities at the well sites, the location and characteristics of hazardous materials and waste streams and the location of all records. In addition, the ERC has the authority to commit all resources needed to carry out this PPC Plan. In the event of an emergency, **the ERC must:**

- Implement the PPC Plan.
- Coordinate the shutdown of necessary equipment/systems for the site.
- Notify all personnel.
- Notify appropriate outside agencies or contractors with designated response roles if their help is needed.
- Ensure the incident is investigated and any necessary corrective actions to prevent future incidents are implemented.

Whenever there is a hazardous materials release, fire, or explosion, the ERC, while working with the General Manager and the HES Manager, is responsible for identifying the character, exact source, amount, and territorial extent of any released materials. Concurrently, the ERC must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment will consider both direct and indirect effects of the chemical release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions). However, this assessment should be done in a manner that protects the safety of all personnel, including the ERC and emergency responders.

Fayette Emergency Response Coordinators

Primary:
Bob Hirtz – General Manager
Cell – 724-323-5632
Office – 724-564-3726

Secondary:
Scott Kohne – Land Manager
Cell – 724-977-1380
Office – 724-564-3737

Tertiary:
Tim Berdar – Construction Supervisor

Cell – 724-323-5651
Office – 724-564-3725

2.3.4. General Manager (GM) and Operations Manger

The General Manager of the Fayette office and the Operations Manager of the Moon Township office should be notified of any emergency situation as soon as possible. The GM is the primary response coordinator. The GM is responsible for dedicating the resources to investigate the cause of any incidents and to implement necessary corrective actions. The GM is responsible for ensuring necessary corrective actions are completed in a timely manner.

Bob Hirtz – General Manager
Cell – 724-323-5632
Office – 724-564-3726

Greg Hild – Operations Manager
Cell – 713-591-4624
Office – 412-856-3481

2.3.5. Health, Environment and Safety Field Manager (HES Field Manager)

The HES Field Manager is responsible for providing technical and regulatory support to the ERCs and General Manager during an incident, and will provide resources necessary for mitigating and investigating the emergency situation.

Alan Haggerty - HES Field Manager
Cell - 412-518-0666
Office - 724-564-3711

3.0 Incident Preparedness

3.1. Training and drills - Field employees and supporting office employees receive training on the pollution control measures described in this PPC Plan. The training will address the following:

- Incident Organization
- Roles and Responsibilities
- Notification Procedures
- Evacuation Procedures
- Incidental Chemical Spill Response

In addition to PPC Plan training, employees who handle hazardous chemicals will be provided training on OSHA's Hazard Communication Standard (HAZCOM). The objective of the HAZCOM training is to familiarize employees with the hazards associated with the chemicals they use in the workplace. Employees with up-to-date HAZCOM training may respond to incidental spills of chemicals in their work area. All other chemical spills require offsite assistance from a HAZMAT team trained in the OSHA 1910.120 HAZWOPER standards. Training records will be kept in employee personnel records.

3.2. Response Equipment

- Spill Equipment – Spill cleanup materials including sorbents, shovels, and containers, are located at the Fayette District Office, the Wicks compressor station, and at some well pads. Spill cleanup materials are also stored in vehicles operated by field employees who are trained in small spill cleanup procedures.
- Fire extinguishers are located at well locations where drilling and completion activities are underway, and in field trucks owned by Chevron.
- First aid kits - First aid kits are located at the compressor station and on each well tender's vehicle.
- MSDS's – Material safety data sheet books are located in the Fayette district office building. Contractors that bring their own hazardous materials on site will provide their own MSDSs and keep them on site while they are working.

4.0 Incident Notification

Any employee who encounters an emergency situation at a well site, compressor station or drilling site should immediately evacuate the area and call the ERC and, if necessary, call 911 or the 911 Call Center specific to the county where the incident has occurred. See the table in Section 9 that lists emergency response entities.

The ERC will determine who will need to be involved with the response and make the proper notifications that can include any of the entities listed in Section 9 depending on the situation.

5.0 General Response Procedures

At the onset of an emergency, the employee first to respond will initiate the evacuation and isolation of the affected area. Once the ERC arrives, they will make an initial assessment of the situation and determine the extent of the incident. The ERC will ensure that all personnel are accounted for (refer to evacuation procedures), call for additional resources, and notify management.

Upon the arrival of outside emergency services (e.g., Police, Fire Department, etc.), the lead agency's on-scene commander has the authority to take over command of emergency response operations.

In the event of an incident, follow these steps:

- Stay calm. Do not panic.
- Evacuate if necessary and notify the ERC immediately thereafter.
- Explain the nature of the incident.
- The ERC will determine if offsite resources are required to respond.

Following an incident, follow these steps:

- The HES Field Manager and GM will ensure all wastes associated with the incident are properly disposed.
- The GM and ERC will ensure replacement of any onsite response equipment used during the incident.
- The GM, HES Field Manager and ERC will coordinate the investigation and development of corrective actions.
- The GM, HES Field Manager and ERC will ensure corrective actions are completed on schedule.

6.0 Site Evacuation Procedures

Employees that encounter an incident while working at or near well locations should immediately leave the area and call the ERC and if necessary emergency services. The Chevron representative, ERC or delegate will ensure all employees and contractors are removed from the area (take a head count), remain together and mustered to a safe location. Remain in this area until emergency services or the ERC arrives.

6.1. Key points for site personnel to follow:

- DO stop all work.
- DO leave area.
- DO follow instructions.
- DO know who your ERC is.
- DO NOT lag behind.
- DO NOT stop for personal belongings.
- DO NOT return to the site until advised to do so.
- DO NOT go home unless authorized to do so.
- DO NOT attempt to move vehicle(s) unless instructed to do so.
- DO NOT block emergency vehicle thoroughfares.

6.2. Area Relocation

Chemical spills, fumes, or smoke may necessitate moving people to a safer area. If a hazardous materials release occurs, employees should move to an area which is effectively "uphill and upwind" of the spill or fumes. The ERC should be notified immediately in case the surrounding community could be affected. The ERC will advise the employees when it is safe to re-enter the area.

7.0 Fire and Explosions

This section outlines the provisions for responding to a fire or explosion at a well site. In general, the responsibilities of Chevron personnel in fire emergencies are to: (1) ensure evacuation, (2) notify the Fire Department, and (3) provide support services to the Fire Department as requested.

If a fire or explosion occurs at a well location, the employee should notify the ERC and, if necessary, call 911 or the 911 Call Center specific to the county where the incident has occurred.

The employee or their supervisor will inform the ERC of the following information:

- Exact location of the fire;
- Type of fire (e.g., flammable liquid, electrical, etc.);
- If any injuries have occurred or if anyone is trapped; and
- Whether or not the fire is near critical systems (e.g., chemical storage areas, tanks, well heads).

8.0 Hazardous Material (HAZMAT) Spills and Releases

The purpose of this section is to minimize the safety, health, and environmental hazards due to spills and releases of hazardous materials. Materials considered hazardous are those which meet the definition set forth in Article 80 of the Uniform Fire Code (latest edition), materials listed in 40 CFR Part 302.4 (CERCLA Hazardous Substances, Appendix 6), 49 CFR Part 172.101 (DOT HAZMAT Table) and materials which are Hazardous wastes as defined in 40 CFR §261.3. Hazardous materials include raw chemical materials, hazardous wastes, and biological wastes.

8.1. Incidental versus Emergency HAZMAT Spills

8.1.1. Hazardous material spills may be classified as either "incidental" or "emergency" incidents. The purpose of distinguishing between the two types of incidents is to allocate properly trained response resources accordingly.

8.1.2. **Incidental events** present minimal health and safety hazards to employees in the immediate work area or those assigned to respond to the event and may be characterized by the following criteria:

- limited in scope
- limited in exposure potential
- limited in toxicity

Other circumstances to consider when determining if a hazardous material spill is incidental are:

- Properties of the spilled chemical (volatility, flammability, corrosivity etc.)
- Employee knowledge of the spilled chemical
- Proximity of spill cleanup equipment
- Availability of appropriate personal protective equipment (PPE)
- Adequate ventilation
- Confined space considerations
  - NOTE: If a hazardous material spill is "incidental," annual HAZCOM training adequately prepares an associate to respond to the incident.

8.1.3. In contrast, OSHA 1910.120(a)(3) defines an "**emergency response**" as the following:

- A response effort by employees from outside the immediate release area or by other designated responders (i.e. mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by the employees in the immediate release area, or by maintenance personnel, are not considered to be emergency responses within the scope of this standard.
- An emergency response may include, but is not limited to, the following situations:
  - The response comes from outside the immediate release area.
  - The release requires evacuation of employees in the area.
  - The release poses, or has the potential to pose, conditions that are immediately dangerous to life and health (IDLH).
  - The release poses a serious threat of fire or explosion (exceeds or has the potential to exceed the lower explosive limit).
  - The release may cause high levels of exposure to toxic substances.
  - There is uncertainty that the employee in the work area can handle the severity of the hazard with the PPE and equipment that has been provided and the exposure limit could easily be exceeded.
  - The spilled chemical is unknown or of unknown origin.
  - The release is threatening waterways

  NOTE: If an employee is uncomfortable or in doubt of the severity of a HazMat spill, they are to assume it is a potential emergency and call the ERC. Only employees with OSHA 24-Hour HazMat training may respond to an emergency HazMat spill.

8.2. Hazardous Material Spills and Releases

8.2.1. For the purposes of this Plan, a **spill** is defined as the accidental discharge of a solid, liquid, or gas from its proper container whether from container failure, upset, or unintentional drainage or venting. Spills are confined to inside a building and are not in contact with the external environment.

A **release** is defined as a spill that enters the environment via soil, water or air.

8.2.2. Immediately upon observing a spill or release, the employee will contact the Environmental Compliance Department for assistance in determining the size and character of the spill. Additional spill cleanup guidance will be provided by appropriately trained members of the Regulatory Compliance Department.

- All environmental **releases** must be communicated to the ERC for appropriate internal and external notifications.
- Reporting procedures for spills or releases that are **emergency response incidents** are described in the preceding sections.

8.2.3. Hazardous material spills of less than five gallons will be defined as "incidental" spills and may be cleaned up by employees with up-to-date HAZCOM training if appropriate cleaning materials are readily available. Hazardous material spills ***greater than five gallons*** will be determined by the ERC as to who cleans up the spill: Chevron personnel or HAZWOPER trained individuals.

8.3. Spill/Release Potential

While it is Chevron's policy to take whatever reasonable measures are available to prevent or minimize the impact of hazardous materials incidents, the possibility still exists that a hazardous materials release may occur.

The **worst probable** spill scenario would involve a release of natural gas at a well site, drilling site or compressor station that is not under normal operating procedures and that can cause harm to individuals and the environment.

8.4. Spill/Release Prevention and Preparedness Measures

Specific measures have to be implemented at the Chevron districts to prevent hazardous material spills whenever possible. These prevention measures include:

- Annual spill potential assessments.
- Annual HAZCOM and hazardous waste training for appropriate employees.
- Annual training on this Plan.
- Annual fire drills/chemical spill exercises.
- All hazardous material containers are kept closed when not in use.

In addition to the activities listed above, specific preparedness measures are implemented at the Chevron district office and sites to minimize the impacts of hazardous material spills on the environment and employees. These preparedness measures include:

- MSDS's accessible to all employees.
- Containment systems for production tanks are located at each well site to prevent possible incidental leaks and spills from entering the environment. These systems are designed to hold 110% of the largest container's capacity.
- Containment systems are used at the drilling and completion sites to prevent process materials and equipment leaks from entering the environment.

8.5. Small Spill Procedures

Releases of small quantities (less than 5 gallons) which pose minimal safety and health dangers, do not adversely affect the environment, and are unlikely to grow in severity, may be handled by Chevron personnel trained to do so or an outside contractor. These personnel should:

- Consult the MSDS located in the work area for chemical-specific hazards;
- Ensure they are wearing proper personal protective equipment;
- Eliminate the source of the spill;
- Prevent the chemical from spreading; and
- Absorb the material using spill wipes.

Several methods and techniques are provided for the purpose of cleaning up spills. Depending on the category of the substance and its location, the following may be used either singularly or in combination. Spill cleanup materials are located at the Fayette District Office and the Wicks compressor station. Additional spill cleanup materials such as sorbents, shovels, and containers are stored in vehicles operated by field employees who are trained in small spill cleanup procedures.

8.5.1. Sorbent Materials - After donning appropriate personal protective equipment sorbent material may be used to absorb residual substances or to aid in controlling a spill from spreading into surrounding areas.

8.5.2. Spill Pillows/Booms - Chemical spill pillows and spill booms contain a highly absorbent and inert material in a porous bag allowing the flow of fluids into absorbent material. The fluids are retained by the absorbent, making it possible to contain the liquid. Place the pillows around the spill area, and working from the outside inward, absorb/collect the liquid. Once the chemical is absorbed by the pillows, they may be disposed of by placing them in the appropriate labeled hazardous waste container.

NOTE: Materials used to contain and absorb hazardous materials will acquire the hazardous characteristics of those materials and should be handled and disposed of accordingly.

8.6. Large Release Procedures

In the event of any release greater than 5 gallons of a hazardous material (see inventory of waste and products in Attachments 1 and 3), the observer should immediately notify the ERC, and provide the following information:

- Location of spill;
- Number of personnel affected/injures;
- Material spilled;
- Amount spilled; and
- Amount that has entered into storm drains, outside waterways, etc., if applicable.

The ERC will determine whether or not to dispatch the appropriate response resources and will notify the HES Field Manager will in turn determine if DEP notification is required.

8.7. Spill Response/Clean Up Contractors

ECS&R
3237 US Highway 19
Conchranton PA 16314
Jim Cessna or Stephanie Eliason-McKinney
814-425-7773

Weavertown Environmental Group
2 Dorrington Rd
Carnegie, PA 15106
Bob Kidd
800-746-4850

McCutcheon Enterprises, Inc.
250 Park Rd
Apollo, PA 15613
Mack Flood
cell 412-999-8700
724-568-3623

8.8. Disposal of Clean-Up Wastes

All waste must be properly characterized in accordance with DEP requirements. The container containing the waste must be kept closed and marked in some way to identify the generating location and contents. PA regulations require characterization of certain waste streams from well locations. The HES Manager must be contacted to provide proper instruction for the disposal of generated spill cleanup waste.

Two types of wastes may be generated via the containment of spilled hazardous substances:

8.8.1. Liquid Wastes

Liquids should be collected and transferred into a properly marked and labeled safety container and disposed of correctly (hazardous or non-hazardous waste). NEVER mix chemicals. This may cause a fire or explosion! Certain solvents will dissolve plastic drums. **Under no circumstances should liquid wastes be dispensed into sinks or drains.**

8.8.2. Solid Waste

If a solid waste is generated by using neutralization, sorbent, or chemical spill pillows/booms, the waste material must be collected and placed into the appropriate labeled (hazardous or non-hazardous waste) drum. Drums should be transferred to an appropriate location for temporary storage (for as short a period of time as possible) until an outside waste hauler can pick-up the drum(s).

8.9. Water Pollution Control

Should any chemical or oil spill get into storm drains or waterways, contact the ERC immediately with the name of the material spilled and the amount that entered the storm drains or waterways. If safe to do so, a responsible individual should stand by the incident to monitor the situation. The employee should attempt to contain the release and divert any additional spilled material from entering the storm drains if safe to do so, or call 911 or the 911 Call Center specific to the county where the incident has occurred. The ERC will then coordinate operations with an outside clean-up contractor.

9.0 Coordination with Outside Agencies

The extent of involvement, if any, by government agencies and/or private organizations in emergencies will depend upon the type and magnitude of the incident. Outside agencies that may become involved in the event of an emergency are as follows:

COUNTY	911 CALL CENTER: Call in the event of a FIRE, SPILL, or MEDICAL EMERGENCY	HOSPITAL	HEALTH DEPARTMENT
Bedford	814-623-1105	UPMC Bedford Memorial 814-623-6161	814-623-2001
Blair	814-940-5910	Nason Hospital 814-224-2141	814-946-7300
Butler	724-282-1221	Butler Memorial Hospital 724-283-6666	724-287-1769
Cambria	814-472-2072	Conemaugh Valley Memorial Hospital 814-534-9000	814-248-3120
Centre	800-479-0050	Mt. Nittany Medical Center 814-231-7000	814-865-0932
Clarion	814-226-7020	Clarion Hospital 814- 226-9500	814-226-2170
Clearfield	814-765-1533	Dubois Regional Medical Center 814-371-2200	814-765-0542
Crawford	814-724-2548	Meadville Medical Center 814-332-6860	814-332-6947
Fayette	724-430-9114	Uniontown Hospital 724-430-5000	724-439-7400
Greene	724-852-2911	Southwest Regional Medical Center 724-627-2602	724-627-3168
Indiana	724-394-1428	Indiana Regional Medical Center 724-357-7000	724-357-2995
Jefferson	814-849-1617	Punxsutawney Area Hospital 814-938-1800	814-938-6630
McKean	814-887-4911	Bradford Regional Medical Center 814-368-4143	814-368-0426
Mercer	724-662-6110	Sharon Regional Health System 800-346-7997	724-662-6068
Somerset	814-445-4133	Somerset Hospital 814-443-5000	814-445-7981
Washington	724-229-4600	Weirton Medical Center 304-797-6000 Washington Hospital 724-225-7000	724-223-4540
Westmoreland	724-836-1551	Excela Health Frick Hospital 724-547-1500	724-832-5315

When incident involves release of chemicals 5 gallons or more, the HES Manager should be notified immediately.	
PA Department of Environmental Protection	**Southwest Region** 412-442-4000 **Northwest Region** 814-332-6945 After hours: 800-373-3398 **Southcentral Region** 877-333-1904 **Northcentral Region** 570-327-3636 **Statewide** (if above contact cannot be made) 800.541.2050
Only when 3 or more employees hospitalized overnight or employee death.	
OSHA	**Erie** 814-461-1492 **Pittsburgh** 412-395-4903 **Harrisburg** 717-782-3902 **After hours** 800-321-6742
When release exceeds reportable quantities (RQ) and in the event of a discharge to Waters of the Commonwealth	
US EPA National Response Center	800-424-8802
For medical emergencies involving chemicals	
Poison Control Center	800-222-1222
For spill cleanup	
ECS & R	814-425-7773
Weavertown Environmental Group	724-746-4850
McCutcheon Enterprises Inc.	724-568-3623

10.0 Investigation and Corrective Action

Following all emergency response actions and activation of this plan, the ERC and managers of the responsible department(s) will hold a debriefing session for all key individuals involved. The ERC will complete a report to document the event. The response will be reviewed and response plans revised, if necessary.

An informal root cause investigation is performed for all incidents. Corrective actions will be implemented where procedures were inadequate or need improvement. Responsible persons will be listed and held accountable for follow-up. Any required retraining will also be documented and account for employees working in similar areas as where the incident occurred.

The Manager responsible for that particular operation will be responsible for insuring all corrective actions are implemented in a timely manner.

11.0 Wastewater Transporters and Waste Disposal Facilities

Water withdrawal sources and waste disposal information must be submitted to the DEP for Marcellus wells. These resources may be used for the drilling and fracing processes.

Drilling cuttings are either disposed of off-site at an approved landfill listed below, or solidified with Portland cement on location, encapsulated within the pit liner, and buried in place in accordance with DEP requirements.

11.1 Waste Frac Water and Drilling Water Transporters

Burkholtz Welding
195 Second Street Box 68
Heilwood, PA 15745

Harmony Gas, Oil & Timber Co.
1448 Patchen Highway
Cherry Tree, PA 15724

Heckman
297 Boy Scout Camp Road
Morgantown, WV 26508

Keister Trucking
511 Clover Run Road
Mahaffey, PA 15757

Force, Inc.
1077 Route 119 Hwy N
Indiana, PA 15701

Keystone Vac
234 Kline Road
Somerset, PA 15501

Appalachian Waste Services
195 Enterprise Lane
Connellsville, PA 15425

11.2 Liquid Waste Disposal Facility Information

Triad-Hunter Disposal
38505 Marietta Rd
Dexter City, OH 45727

11.3 Sludge and Liquid Disposal facility information (for spills, flowback residue, and other waste sludges):

CCS Corporation
Westmoreland Waste Sanitary Landfill
111 Conner Lane
Belle Vernon, PA 15301

11.4 Solid Waste Disposal Facility Information

Veolia Landfill
Chestnut Valley
1184 McClellandton Rd
McClellandton, PA 15458

Waste Management
Laurel Highland Landfill
260 Laurel Ridge Road
Johnstown, PA 15909

Waste Management
Arden Sanitary Landfill
Arden Station Rd
Washington, PA 15301

Waste Management
South Hills Landfill
3100 Hill Road
South Park, PA 15129

Republic/Allied Services
Whitefeather Landfill
2401 East Whitefeather Road
Pinconning, MI 48650

Waste Management
Shade Landfill
1176 No. 1Road
Cairnbrook, PA 15924

Waste Management
Lakeview LF
851 Robison Rd E,
Erie, PA 16509

Waste Management
S Alleghenies Landfill
843 Miller Picking Road
Davidsville, PA 15928

Waste Management
Evergreen Landfill
Rt 119 North Luciousboro Road
Coral, PA 15731

Waste Management
Meadowfill Landfill
Rt. 2
Bridgeport, WV 26330

Waste Management
Alliance Sanitary Landfill
398 S. Keyser Ave.
Taylor, PA 18517

Waste Management
Phoenix Resources Landfill
782 Antrim Road
Wellsboro, PA 16901

12.0 Waste Control and Disposal Methods

Wastes stored in containers are regularly inspected by field operations personnel to ensure overfill does not occur. Overflow prevention methods are implemented for tanks and containers used during drill and fracing operations. Any dispensing of waste from pits to containers is performed under the direct supervision of a Chevron employee or an approved contractor. All containers are above-ground. Waste stored in pits is regularly inspected to ensure the required free-board height is maintained.

Chevron-generated wastes are characterized to determine proper residual waste codes and ensure proper disposal arrangements are made. See Attachment 2 for a description of disposal methods for all wastes generated at well locations.

13.0 History of Pollution Incidents

Chevron maintains a record of all incidents of hydrocarbon and non-hydrocarbon spills that have occurred as a result of gas drilling and production activities. Incident history indicates that a majority of the spills are less than ten gallons. Spills greater than ten gallons that occurred are:

- 2 hydraulic fluid spills (approximately 15 gallons each),
- 2 drill mud spills (approximately one bbl and four bbls each),
- 1diesel fuel spill (approximately 20 gallons),
- 1 brine spill (15-20 gallons), and
- 1 condensate spill (approximately 20 gallons).

A majority of the spill incidents have been attributed to mechanical failure rather than human error.

All incidents were cleaned up in accordance with state and local requirements. Major incidents that occur at a well location, due to employee or contractor actions, are followed up with a formal root cause analysis. Preventive actions, responsibilities, and adequacy of resources are some of the many aspects investigated during the root cause analysis.

14.0 Pollution Prevention Measures

Chevron has implemented many different pollution prevention measures to help reduce or eliminate any possibility of materials entering the environment via air, water and land. These measures include the following:

14.1. Pressure Barrier Policy

Chevron's standard operating procedure requires a double barrier system at all well heads and wherever gas flow exists. Valves and/or blow out prevention systems are implemented as needed per application.

14.2. Fluid control measures

- Condensate transfers are manned at all times.
- Flowback monitoring is performed during the entire process
- Constant monitoring is performed during the fracing process
- Fluid level control systems are installed for all stock tanks
- Dikes with permanent lining systems are installed for all new well site tanks systems

14.3. Vapory recovery systems are being implemented in natural gas condensate areas

- Production tanks containing brine and/or condensate are epoxy lined, and the lower 12 inches are under-coated with coal-tar epoxy to provide corrosion protection.
- Inspection procedures are being conducted on a regular basis to assure all dike drains are plugged and tightened, all tank valves are locked and plugged and that all dikes are in good condition.
- New flowback procedures have been developed that prevent the chances of natural gas condensate to be dispensed into the holding pits, therefore, reducing the chances of contaminating the environment.
- Inspections are performed more frequently on high hazard sites including during drilling, fracing and flowback processes.

15.0 Well Site Specific Information

When a well site has been selected, the WELL SITE SPECIFIC ADDENDUM included in this PPC Plan will be modified to include site specific information. The document will be placed over the front page of this plan and maintained on location as required. The following information will be listed:

- Site Name,
- County,
- Access Road GPS Coordinates,
- Local Emergency Contact Numbers,
- Directions,
- Supplemental Waste and Chemical Inventory Items not already listed in Attachments 1 or 2

16.0 Housekeeping Program

The following housekeeping items have been implemented at all sites:

- Neat and orderly storage of chemicals including spill containment, labeling, closed containers and upright storage.
- Prompt removal of small spillage.
- Regular refuse pickup and disposal
- Temporary restroom facilities
- Regular site inspections for slip and fall issues.

17.0 Security

The following procedures have been implemented:

- Lighting is used when work is required to be completed during non-daylight hours.
- Fencing is used to protect pit areas.
- Locks on stock tank drains valves are installed.
- If on certain sites or areas where there are safety and security concerns, Chevron provides on-location security personnel to monitor these areas until all work is complete.

18.0 External Factors Planning

External factors are those most likely to be characterized as acts of nature, or those as a result of human carelessness or vandalism. External factors that could potentially result in a discharge include:

- Severe weather conditions such as extreme wind and/or cold, torrential rainfall, or blizzards that could contribute to equipment malfunction and/or failure caused by freezing, fatigue, or stress; power failure; fire; hazardous location and roadway conditions; decreased visibility; pit containment failure; and inability to marshal a timely and effective and response.

  Protective measures for severe weather include close monitoring of weather conditions, implementation of expanded policies and procedures for inspection, testing and operation of mechanical, hydraulic and pneumatic equipment during extreme environmental conditions, availability of emergency back-up power, enhanced location and road maintenance measures, nighttime over-the-road travel restrictions, enhance pit inspection, maintenance and enhanced erosion control measures, and implementation of decreased exposure times and increased implementation of personal protective equipment.

- Vandalism, strikes, and acts of terrorism that could contribute to malfunction, destruction and or loss of equipment, along with impedance to entering and/or the closure of facilities.

  Protective measures include enhanced monitoring of social, political and environmental conditions, implementation of heightened security measures in times of elevated risk, implementation of mitigating policies and procedures designed to protect personnel, operations and equipment, investigation and identification of alternative equipment, resources, facilities, and manpower.

19.0 Inspections

Inspections are performed at well locations on a regular basis for erosion and sediment (E&S) controls, safety issues, security issues and environmental issues. Deficiencies are immediately reported to the location's Person-in-Charge, and also reported to the department supervisor. Depending on the significance, the deficiency will be tracked in a database to ensure corrective actions are properly performed.

20.0 Preventative Maintenance

Regularly scheduled preventive maintenance on equipment, pumps, piping systems and valves, and engines is of utmost importance, as they help minimize the occurrence of leaks and releases of chemicals and other materials to containment systems and/or the environment.

Repairs to equipment and structures will be made on an as-needed basis, based on manufacturer's recommendations and the routine inspection recommendations. Repair work will be initiated and completed in a timely manner in order to reduce the potential for spills or leaks.

21.0 Training

Initial training on Chevron's PPC Plan is provided to Chevron employees that have responsibilities delineated in this PPC Plan. Employees are also trained to be able to respond effectively to emergencies by familiarizing them with emergency procedures including incident notification and response and emergency equipment including, where appropriate: procedures for using, inspecting, repairing and replacing emergency and monitoring equipment, communication and alarm systems, and response to fires and spills.

Contractors are responsible for training their employees for pollution response actions. Chevron employs a stringent contractor approval process to ensure appropriate training is provided to contract employees performing work at a Chevron location.

ATTACHMENT 1

WELL SITE CHEMICAL INVENTORY

HAZARDOUS MATERIAL	LOCATION	AVERAGE QUANTITY	CONTAINER TYPE
Natural Gas	Possibly all sites	Continuous flow	well head, separator, pipe line
Methanol	Fayette District Field office Employee vehicles	10 – 55 gallon drums One 55 gallon drum or smaller jerrycan	metal drums, jerry can
Crude Oil	Some well sites	8000 gallon	separator, tank
DRILLING CHEMICALS			
Acetylene	Drilling Site	1- 100 lb.	cylinder
Diesel Fuel	Drilling Site	9000 gallons	tank
Hydraulic fluid	Drilling Site	125 gallon	tank or metal drum
Oxygen	Drilling Site	1 – 100 lb.	cylinder
Propane	Drilling site	3 – 100 lb.	cylinder
Baroid	Drilling sites	19,000 lbs.	bag
Permaseal	Drilling Sites	2250 lbs.	plastic tote
Premium cement	Drilling sites	52,000 lbs.	bags or premixed in tanker truck
ABS40	Drilling sites	5000 gallons	tank
Barite	Drilling sites	354,000 lbs.	bag
ABS-40 mud/slurry	Drilling sites	188,131 lbs	tank
Lime	Drilling sites	4500 lbs.	bag
FRACING CHEMICALS			
Explosives	Frac sites	500 shots	secured box
Hydrochloric acid 7.5%	Frac sites	78,172 lb	tanker truck
Silica sand	Frac sites	1,104,375 lbs	sand hog/tank
Unislik SAT-50	Frac sites	83,903 lbs	plastic tote
EC6116A	Frac sites	1700 gallons	plastic tote
Scalehib 100	Frac sites	1700 gallons	plastic tote
CMHPG	Frac sites	2000 lbs.	bag
Iron Control A (EC6673W)	Frac sites	22,739 lbs	tote

ATTACHMENT 2

WASTE DISPOSAL METHODS

See section 11 for specific addresses

Residual Waste Stream	TREATMENT	DISPOSAL	REUSE at Chevron location
DRILLING WASTE:			
DRILLING WATER	Appalachian Waste Services	-	**YES**
DRILL CUTTINGS	On-site Stabilization	Veolia or Waste Management [or in limited instances: on-site burial in compliance with DEP Regulations]	NO
RIG WASH	Verify absence of hydrocarbons	-	**YES**
CELLAR WATER	Verify absence of hydrocarbons	-	**YES**
DRILL FLUID/MUD	On-site separation	-	**YES**
FRAC/COMPLETIONS WASTE:			
FLOWBACK	On-site treatment by ComTech	-	**YES**
PIT LINERS	Residue removed as needed	Veolia or Waste Management	NO
PIT LINER RESIDUE	Liquids are separated on site and treated on site by Comtech	Solids: Landfilled at Veolia or Waste Management or Republic/Allied Services	Liquids: **YES** Solids: NO
WORK TANK SLUDGE	On-site treatment	-	**YES**
PRODUCTION AND OTHER WASTE:			
TANK DIKE PRECIPITATION	-	* Disposal only for unacceptable quality precipitation from condensate-bearing tank storage areas or from waste with oil-sheen: Hunter Disposal	**YES ***
PRODUCTION BRINE	-	-	**YES**
SPILLS	-	Veolia or Waste Management	NO

ATTACHMENT 3

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REVISION UPDATES

REVISION	REASON FOR CHANGE	CHANGE MADE BY	DATE
1	New issue for Chevron Appalachia, LLC	C. Nichols	9/26/2011
2	Revisions to include newly acquired operations in Pennsylvania	C. Nichols J. Buckley, Tetra Tech	11/4/2011